Relating to Edison.

Dear Friend,

Your committee is at last able to report that the Edison Group Picture has been finally completed and will this week be presented to Mr. Edison.

It contains "65" photographs of Mr. Edison's associates of the days of 65 Fifth Avenue. Each photograph received has been reduced to a standard size and tone containing the name of each person engrossed under it; and we feel that Messrs. Dempsey and Carroll have turned out a very satisfactory piece of work.

A 14 by 10 negative has been made and those who desire to have a photograph of the same can do so by mailing two dollars to Mr. William H. Meadowcroft, care of Thomas A. Edison, Orange, N. J. While this sum is in excess of its actual cost, still the expenditures incident to the celebration, including the cost of this picture, were in excess of the contributions received, and we hope to make up the deficit in this manner.

The original photographs which we have received will be returned, and we have thought best to hold them so that they can be sent in the same package with the group picture, if the latter be ordered.

The delay in completing this group picture has been due to the difficulties encountered in getting the proper photographs together, but now that the work is done, your committee trusts that it has acted in accordance with your desires, and unless instructed to the contrary, will consider itself discharged.

With best wishes, believe us to be

Yours very truly,

Robert T. Lozier,
Chairman.
E. H. Johnson.
Charles A. Benton.
T. C. Martin.
William H. Meadowcroft,
Treasurer.

Room 1923, 30 Church Street, New York, July 22, 1912.

COPY

Mr. William H. Meadowcroft, c/o Thomas A. Edison, Orange, N. J.

My dear Mr. Meadowcroft:

Enclosed herewith is my check for \$2.00, to pay for one copy of the reduced Edison Group Picture, which please deliver at above address.

I am glad to hear of the successful consumation of this undertaking, for which the Committee is to be congratulated, and thanked.

I trust everything, including good health, goes well with you, and with best wishes, I remain,

Sincerely yours,

Room 1923, 30 Church Street,

New York, Aug. 2, 1912.

COPY

Mr. Wm. H. Meadoweroft, c/o Thomas A. Edison, Orange, N. J.

My dear Mr. Meadowcfoft:

I have not get received the reduced photograph of group of Edison Men, for which I sent check on July 22nd.

I am not trying to punch you up, my dear fellow, but merely wish to forestall any chances of my copy having possibly been lost on the way.

Sincerely yours,

Aug 3, 1912. Le John Man Mondo He dunalle gramola Latinail. " Arole Melless" Edison, Sur Bork.

My dear Mr. Blantee:

not auswer as there were so many and ed day that I received your letter with cheek, but Replying to yours of yesterday I would

was quite and. The batel of fuctues was a now

being made. M. Edwan has cousented to autograph

be sent along. them. So whow they are all ready they well

Trushing your beauth is good and that

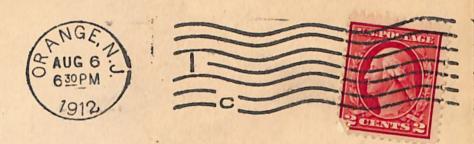
alle is weel with you, I remain

Muspalleadouscuoft leng huly yours

Chur, of Ceaning Tuesday! ography of over their ygans recolleryou in this well-thurn four and-wit-It dies one yord to got a been from In I am pear to go away fer a long house house mus solut me solut mus solut me solut me solut me solut me solut me solut me solut so It a ploeedady chambed powerent by to been Edward autograph was need andle I thunk you for your been of your My dear M. Meadow outte; COp Stew York, duy, 5, 1912, Horm 1923 - 30 Church Street,

LABORATORY

THOMAS A. EDISON, ORÁNGE, N. J.



Mr. Charles L. Clarke.

30 Church Street,

Room 1923. New york City.

Cable Address "Edison, New York"

From the Laboratory Thomas A. Edison,

Orange, N.J.
Aug. 6, 1912.

My dear Mr. Clarke:

Thanks for your kind favor of yesterday's date. I am glad to learn that you are going to take a long vacation, and just write to say that I hope it may be of great benefit to you and enable you to come back with a good stock of health and strength. I have noted the address to which you desire the picture sent.

With kindest regards, I remain

Yours sincerely,

Welleadownoff

BOARD OF TRUSTEES

ISAAC N. SELIGMAN

ELGIN R. L. GOULD
TREASURER

WILLIAM H. BLISS
HENRY CLEWS
ROBERT J. COLLIER
ROBERT ERSKINE ELY
EDWIN TROWBRIDGE HALL
JOHN MITCHELL
JAMES B. REYNOLDS

CIVIC FORUM PLATFORM SPEAKERS, 1907-1914

EX-PRESIDENT TAFT

EX-PRESIDENT ROOSEVELT

HON. WILLIAM JENNINGS BRYAN

*JUSTICE DAVID J. BREWER
SUPREME COURT AT WASHINGTON

JUSTICE CHARLES E. HUGHES
SUPREME COURT AT WASHINGTON

HON. ROBERT M. LA FOLLETTE SENATOR FROM WISCONSIN

HON. PHILANDER C. KNOX EX-SECRETARY OF STATE

HON. JOSEPH W. FOLK
EX-GOVERNOR OF MISSOURI

HON. WILLIAM H. LANGDON
EX-DISTRICT ATTORNEY,
SAN FRANCISCO

EX-PRESIDENT CHARLES W. ELIOT

PRESIDENT EDWIN A. ALDERMAN

ADMIRAL ROBERT E. PEARY
DISCOVERER OF THE NORTH POLE

FREDERICK WINSLOW TAYLOR

EX-PRESIDENT AMERICAN SOCIETY

OF MECHANICAL ENGINEERS

COLONEL GEORGE W. GOETHALS

RT. HON. JAMES BRYCE

HON. WU TING FANG
EX-MINISTER FROM CHINA

COUNT ALBERT APPONYI

MEMBER OF HUNGARIAN PARLIAMENT

HON. KEIR HARDIE, M.P.

PROF. PAUL MILYOUKOV
MEMBER OF THE DUMA FOR
ST. PETERSBURG

BARON DAIROKU KIKUCHI
PRESIDENT UNIVERSITY OF KYOTO

SIR ERNEST H. SHACKLETON ANTARCTIC EXPLORER

FREDERIK VAN EEDEN
SOCIOLOGIST, POET, OF HOLLAND

THE CIVIC FORUM

HONORARY COUNCIL

EX-PRESIDENT TAFT
RT. REV. DAVID H. GREER
HON, OSCAR S. STRAUS
ALBERT SHAW
SAMUEL GOMPERS

HCN. WILLIAM JENNINGS BRYAN
GREER MOST REV. JOHN IRELAND
RAUS REV. LYMAN ABBOTT
JOHN GRAHAM BROOKS
HON. NAHUM J. BACHELDER
WILLIAM DEAN HOWELLS

ROBERT ERSKINE ELY, DIRECTOR

CABLE ADDRESS CIFORUM, NEW YORK

TELEPHONE 4897 BRYANT

CHARLES S. LECKY
MEMBERSHIP SECRETARY

147 WEST 48TH STREET, NEW YORK

April 29, 1915.

Dear Sir:-

Mr. Thomas A. Edison is to receive The Civic Forum Medal of Honor for Distinguished Public Service at a meeting of the Forum, to be held in Carnegie Hall on Thursday evening, May 6, at 8.15. President Butler of Columbia University will preside, and addresses will also be made by Mr. Marconi, Mr. Charles P. Steinmetz, President Richard C. Maclaurin of the Massachusetts Institute of Technology, and Mr. Charles A. Coffin. A poem written for this occasion will be read by its author, Mr. Percy Mackaye.

The officers of The Civic Forum take pleasure in inviting you to occupy a platform seat at this meeting. On your acceptance of this invitation, we should be happy to send you a card of admission.

Hoping very much that you will be able to be present, I am,

Yours very truly,



THE OFFICERS OF THE CIVIC FORUM TAKE PLEASURE IN INVITING

Mr. Charles L. Clarke

TO ATTEND THE NATIONAL TESTIMONIAL TO

MR. THOMAS A. EDISON

IN CARNEGIE HALL

THURSDAY EVENING, MAY 6TH, 1915, AT 8.15

ADMISSION TICKETS WILL BE SENT UPON RECEIPT OF THE ACCEPTANCE OF THIS INVITATION

PLEASE REPLY WITHOUT DELAY TO
MISS MARY B. CLEVELAND, EXECUTIVE SECRETARY
147 WEST 48th STREET, NEW YORK CITY

THE ACCOMPANYING ANNOUNCEMENT GIVES DETAILS OF THE PROGRAM



Consulting Engineering Deft, General Electric Co., Schaueckarly, 10, 4, Milay 3, 1915

Min M. B. Cleveland, Exec. Szeg., 147 West 48th Street, "Mew York Cety.

Den Madam:

There received an invitation, dated the 29th well, to occupy a platform peat on the occasion of presenting the cierce of oran Medal to Mr. Edison, presently as one of his ordest assistants in the electric light development beginning thirty-fire years ago, whether this requires a special admission early if is my intention to be present. I desire three admissions actorether,

Very truly yours,

BOARD OF TRUSTEES

ISAAC N. SELIGMAN

ELGIN R. L. GOULD
TREASURER

WILLIAM H. BLISS
HENRY CLEWS
ROBERT J. COLLIER
ROBERT ERSKINE ELY
JOHN MITCHELL

JAMES B. REYNOLDS

THE CIVIC FORUM

HONORARY COUNCIL

EX-PRESIDENT TAFT
RT. REV. DAVID H. GREER
HON, OSCAR S. STRAUS
ALBERT SHAW
SAMUEL GOMPERS

HON. WILLIAM JENNINGS BRYAN MOST REV. JOHN IRELAND REV. LYMAN ABBOTT JOHN GRAHAM BROOKS HON. NAHUM J. BACHELDER

WILLIAM DEAN HOWELLS

CABLE ADDRESS
CIFORUM, NEW YORK

TELEPHONE 4897 BRYANT

CHARLES S. LECKY
MEMBERSHIP SECRETARY

ROBERT ERSKINE ELY, DIRECTOR

MARY B. CLEVELAND. EXECUTIVE SECRETARY

21 WEST 44TH STREET, NEW YORK

May 4, 1915.

CIVIC FORUM PLATFORM SPEAKERS, 1907-1912

EX-PRESIDENT TAFT

EX-PRESIDENT ROOSEVELT

HON. WILLIAM JENNINGS BRYAN

*JUSTICE DAVID J. BREWER
SUPREME COURT AT WASHINGTON

JUSTICE CHARLES E. HUGHES
SUPREME COURT AT WASHINGTON

HON. ROBERT M. LA FOLLETTE SENATOR FROM WISCONSIN

HON. PHILANDER C. KNOX

HON. JOSEPH W. FOLK
EX-GOVERNOR OF MISSOURI

HON. WILLIAM H. LANGDON

EX-DISTRICT ATTORNEY,

SAN FRANCISCO

EX-PRESIDENT CHARLES W. ELIOT

PRESIDENT EDWIN A. ALDERMAN

ADMIRAL ROBERT E. PEARY
DISCOVERER OF THE NORTH POLE

FREDERICK WINSLOW TAYLOR

EX-PRESIDENT AMERICAN SOCIETY

OF MECHANICAL ENGINEERS

RT. HON. JAMES BRYCE
EX-AMBASSADOR FROM GREAT BRITAIN

HON. WU TING FANG

COUNT ALBERT APPONYI

MEMBER OF HUNGARIAN PARLIAMENT

HOWAL KEIR HARDIE, M.P.

PROF. PAUL MILYOUKOV
MEMBER OF THE DUMA FOR

BARON DAIROKU KIKUCHI
PRESIDENT UNIVERSITY OF KYOTO

SIR ERNEST H. SHACKLETON

FREDERIK VAN EEDEN

BDECEASED.

My dear Mr. Clarke: -

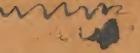
At the request of Mr. William H. Meadowcroft, an invitation was sent to you a few days ago to attend the Testimonial to Mr. Thomas A. Edison in Carnegie Hall on Thursday evening, May 6th, at 8:15, when The Civic Forum Medal of Honor for Distinguished Public Service will be presented to him. President Butler of Columbia University will preside, and addresses will be made by Mr. Marconi, Hon. J. Franklin Fort, former Governor of New Jersey, Mr. Charles P. Steinmetz, President Richard C. Maclaurin of the Massachusetts Institute of Technology and Mr. Charles A. Coffin. A poem for this occasion will be read by its author, Mr. Percy MacKaye. Among the guests of honor will be Mr. Henry Ford, Mr. John Burroughs and Admiral Robert E. Peary.

We have not as yet received your reply to this invitation, and inasmuch as there are but a few choice seats remaining, the demand from the general public being so very large, we suggest, if you wish to attend the meeting, that you telephone (4897 Bryant) immediately, stating the number of tickets you would like to have.

Very truly Yours,

Executive Secretary

Many B. Chorland



ALL CALL EDISON WORLD BENEFACTOR

Carnegie Hall Crowded as Dr. Butler Presents Civic Forum Gold Medal.

WILSON SENDS GREETINGS

Marconi Eulogizes Fellow-Inventor -Publicists and Scientists Add Praise-Poem Is Read.

"Inventor and World Benefactor" was the inscription on the gold medal of the Civic Forum which was presented to Thomas A. Edison last night in Carnagio Hall as a national testimonial. President Butler of Columbia University, who presided and made the presentation, solds. presentation, said:

in

"This gold medal is not awarded for any particular achievement, but for distinguished services and great scientific achievements and in recognition of a great career, which has a place among the very highest in the roll of human

history. Not all the friends and admirers of the inventor and scientist who went to the hall to pay him honor were able to get inside. All the seats from gal-lery to stage were occupied when Mr. and Mrs. Edison walked with the speakers to the front of the platform. The great audience of men and women stood when M. Edison and the others on the rtage arose as the presentation was made. Those who expected that Mr. Edison would talk to them were disappointed when he resumed his sent after a whispered conference with Dr. Butler, who announced:

"Mr. Edison has whispered to me that actions speak louder than words in appreciation.

President Wilson sent this message to Mr. Edison, through Isaac N. Selig-

The White House.

Washington, D. C., May 8, 1915.

Please present my sincere and most cordial greetings to Mr. Edison this evening, and say how happy I would be if a were possible for me to be present to express my great admiration of his distinguished services and achievements.

WOODEOW WILSON.

Ex-Presidents Send Greetings.

Letters from ex-President Theodore Roosevelt and ex-President William H. Taft, Alexander Graham Bell, and others were read by Robert Erskine Ely, a trustee of the Forum. Those who lauded the work and personality of Mr. Edison in addresses were Nicholas Murray Butler, ex-Governor J. Franklin Fort of New Jersey, George McAneny, Guglielmo Marconi, President Richard C. Maclaurin of the Massachusetts Institute of Technology, Charles A. Coffin, Chairman of the Board of the General Electric Company: Dr. John A. Brashear, the Pittsburgh astronomer, and Dr. Charles P. Steinmetz.

Percy Mackaye recited a poem he had writen for the occasion. Here are the opening stanzas:

writen for the occasion. Actic sea
A ship went down through the frozen
Captain and crew they watched her go:
They ran her colors free;
They ran her colors free;
They cheered her fustily;
And far peoples chanted her praise with
them
Where a phonograph, from her plunging
stem,
Pealed to the stars her requiem.
A thousand leagues through the Afric wood
A man went tooting the jungle's wealth;
Leopard nor iten could stuy his steatth,
Nor sleeping-death nor fleed;
lie drew not the monster' blood,
But he led them afree chanter to
ing day
With the wondering children of Broadway.
A thousand leagues, or a thousand years,
Are motes in the gaze of the teeking min to
By its own radiance thought can find
its way to ultimate spheres
Dark, till its beam appears
To blazen them, so on that beam hath run—
Round Arette moon and Afric sun—
The cleetric mind of Edison,
The medal, which is one awarded an-

The medal, which is one awarded annually by the Civic Forum for distinguished public service, was massive and

"Muster of Nature's Forces."

"The ceremony for which we have gathered here, with the public as the jury of award, is characteristically and significantly American," said President Ruttler. "We are gathered to award this medal to Thomas A. Edison, seer, wizard, and master of the forces of nature, who has bent them in many ways to the service, happiness, and uplifting of mankind. If the European war represents the triumph of brute force over the better nature of man, this award

the better nature of man, this award represents the triumph of man's better nature over brute force.

"I remember at the Centennial in 1876 the one object shown as the most remarkable invention of that time was a single are light. If you would seek a monument of Mr. Edison, look about you."

monument of Mr. Edison, look about you."

Ex-Governor Fort said Mr. Edison was the "most modest great man of the present time."

"He has made more men and women and children laugh than any other man, and has made it possible for more people to be amused than has any one else in the history of the world." he continued. "Nothing is impossible to Edison. He is no eight-hour-day man. He has done all this by the hardest kind of work, day and night. There is nothing selfish about him; he cares nothing for money. All those who know him love him. Thomas A. Edison is an uncrowned king among men."

Mr. Marconi asserted that the entire world acclaimed Thomas A. Edison as friend and benefactor.

Edison's Definition of Gentus.

President MacLaurin said:

"Some one asked Lord Kelvin why no one before Edison had invented so simple a thing as the feeder system. 'The only reason I can think of,' he replied, is that no one else was Edison,' Mr. Edison has proved himself a great force in education by giving so brilliant an exhibition of the method of science, the method of experimentation. His other

method of experimentation. His other great contribution to the progress of education has been his constant insistence on the gospel of work.
"Genius was long ago described as 'an infinite capacity for faking pains.' We all feel this to be inadequate, and Edison has put the underlying thought more accurately and more forcibly by his aphorism that 'genius is I per cent. inspiration and 99 per cent. perspiration.'

inspiration and 99 per cent. perspira-tion."

Mr. Edison, after hearing his work and achievements praised, broke into a smile of satisfaction when Charles A. Coffla referred to his "charming human quali-ties."

Mr. McAneny said Edison was "one of the creators of the modern City of New York."

PETERT OF ACOUSTY OF AME

Cable Address "Edison New York" From the Sakoratory Thomas A. Edison, Orange, N.G. M.R. Hutchison, E.E., Ph. D. Chief Engineer October 16th, 1915. Mr. Charles L. Clarke, Gen'l. Elec. Co.. Schenectady, N.Y. My dear Mr. Clarke:-At 8.00 P. M. October 21st, Edison Day, Mr. Edison, in San Francisco, will speak to us over the Transcontinental telephone. I have arranged through the courtesy of the American Telegraph and Telephone Company for one hundred chairs to be equipped with receivers in the library of the Laboratory. The opening address from Orange to Mr. Edison will be made by the Edison Diamond Disc Phonograph, and he will respond verbally. We will then play a record for him and he in turn will have a record played on his phonograph in Frisco. LABORATORY OF THOMAS A. EDISON. ORANGE, N. J.





Mr. Charles L. Clarke.

General Electric Co.. Schenectady.

N. Y.

Cable Address "Edison New York" From the Laboratory Thomas A. Edison, Orange, N.J. M.R. Hutchison, E.E., Ph.D. Chief Engineer October 16th, 1915. Mr. Charles L. Clarke, Gen'l. Elec. Co., Schenectady, N.Y. My dear Mr. Clarke:-At 8.00 P. M. October 21st, Edison Day, Mr. Edison, in San Francisco, will speak to us over the Transcontinental telephone. I have arranged through the courtesy of the American Telegraph and Telephone Company for one hundred chairs to be equipped with receivers in the library of the Laboratory. The opening address from Orange to Mr. Edison will be made by the Edison Diamond Disc Phonograph, and he will respond verbally. We will then play a record for him and he in turn will have a record played on his phonograph in Frisco. Mr. Edison's Telescribe will record all conversation and each friend present will receive a commercially moulded record in commemoration of the event. Will you do us the honor of attending? R.S.V.P. Yours sincerely Chief Engineer to and Personal Representative of Mr. Edison. EC.

Schenectady, N.Y. October 18th, 1915.

Dr. M.R. Hutchipson, Chief Engineer, Edison Laboratory, Orange, N.J.

My dear Dr. Hutchigson:

kind invitation of October 16th to be present in
the Edison Laboratory on October 21st where
ceremonies are to be held in celebration of the
36th anniversary of the invention of the incandescent
lamp at which telephonic communication will be
held between Ar. Edison at San Francisco and those
in the Laboratory.

As one of the old Edison men it would give me unalloyed pleasure to be present on this happy occasion, but business demands will prevent my presence in person, although I certainly shall be with you all in spirit. Because of my physical absence this time, do not by any means count me out, but let me remain on the list of those who assisted which in the early days and who wishes still to be one of the boys.

It may be of passing interest to know

in accordance with my best information, that in the large force at Schenectady Mr. W.S. Andrews stands at the head of those here longest in service in the modern electrical era, he having begun work with Edison at Menlo Park in November, 1879, while I count myself second on the list, entering the Henlo Park Laboratory on February 1st, 1880. I believe resident E.W.Rice, Jr. comes third and General Manager G.E. Emmons stands fourth on the list.

With best wishes to yourself and kind remembrances to Mr. Edison, I am

Yours sincerely,

CONSULTING ENGINEERING DEP'T.

CEC: BR.

Schenectady, N.Y. October 19th, 1915.

Mr. Wm. H. Meadoweroft, Sec'y Edison Laboratory, Orange, N.J.

My dear Mr. Meadoweroft: -

Yesterday I received an invitation from Mr. Hutchison to aattend the Edison Day celebration at the Laboratory on the Evening of October 21st.

impossible to break-away from business and wrote to Mr. Hutchison to that effect, but I have been told not to let that stand in the way and that Ii should attent. Therefore, I shall be happy to be on hand and join in the festivities with old friends.

As Mr. and Mrs. Edison will, naturally, not be present the fun will be confined to the Laboratory and the question arises, are we expected, and is it desirable to come clad in a dress suit. - or will any old thing do?

of course I want to appear in proper form, uitably groomed for the occasion, but do not wish to seem to have overdone the matter and make it look as though I was trying to appear better

than anybody else, by being rigged-up in some highfalutin regalia.

will you kindly give me a tip, so that I may not show my ignorance by doing the wrong thing, addressing your letter to me, in care of Mr. L.B. Judson, General Electric Company, 30 Church Street, New York City.

Sincerely yours,

CONSULTING ENGINEERING DEP'T.

OLC:BR

Schenectady, N.Y. October 19th, 1915.

Mr. M.R. Hutchison, Chief Engineer, Edison Laboratory, Orange, N.J.

My dear Mr. Hutchison:

Yesterday I wrote you a letter saying, in effect, that I could not be present at the celebration on the evening of Edison Day, but I have been told that I ought to go and today sent you a telegram reading:

"Cancel my letter and count me present on Edison Evening."

which telegram, this letter is to confirm.

Again thanking you, I am

Sincerely yours,

CONSULTING ENGINEERING DEP'T.

CLC: BR

MR. M.R. HUTCHISON, EDISON LABORATORY ORANGE...N.J.

CANCEL MY LETTER AND COUNT ME PRESENT ON EDISON EVENING.

10:30

CHAO. L. CLARKE.



Trans-Continental Telephone--Diamond Disc



Edison Day Celebration Panama Pacific Exposition

Edison Laboratory

October 21, 1915

THE WATTERSAN & HOLD CO. MERCANN. IS. J. PAT. JUNE & 1881

The new york Times. October 22.1915. WIRELESS SENDS VOICE OVER ATLANTIC; SPEECH FROM ARLINGTON, VA., TO PARIS HEARD AT THE SAME TIME IN HONOLULU

VISION OF YEARS ACHIEVED

French Army Officers In Eiffel Tower Verify the Results:

VOICE RECOGNIZED IN HAWAII

"Hello" and "Good-bye" Are Distinctly Understood France on Three Nights

UNDER ADVERSE CONDITIONS

Use of Foreign Station Restricted Owing to War-Static Disturbances Are Overcome.

Words uttered in Arlington, Va., have been heard in Paris, France, on three different occasions within the last ten days. On Tuesday and Wednesday nights of last week, and again on Wednesday night of this week, the human voice was projected across the Atlantic for the first times in history, and "Hellos" and "Good-byes" said in Arlington were heard and understood in the French capital, 3,800 miles from the point of transmission.

Announcement of the epochal achievement was made officially by the American Telephone and Telegraph Company last night, following cabled confirmation of the success of the wireless telephone experiments received in New York and in Washington from the company's engineers in Paris.

H. E. Shreeve and A. M. Curtis, of the staff of John J. Carty, the Chief Engineer of the American Telephone and Telegraph Company, went to France to represent the company in the d on Page 3. transatiantic experiments. For several weeks they have been severing red tape and making other arrangements for the tests.

Paris and Honolulu Cable Tidings Of Marvel of Wireless Telephony

These cable messages from Paris and Honolulu tell how words spoken in Arlington, Va., and carried by wireless were heard across the Atlantic and half way across the Pacific at the same time:

Paris, Oct. 21, 1915.

American Telephone and Telegraph Company, New York: Received your call 12:20 A. M. and thereafter. Though gaps and statics heard the words: "Hello! How?" etcetera. Heard at approximately 12:55, "Good-bye, Shreeve." several times repeated. HERBERT E. SHREEVE.

Honolulu, Thursday, Oct. 21, 1915. American Telephone and Telegraph Company, New York:
Heard well entire schedule. "Hello Shreeve. This is Webb talking," etcetera. Voice easily recognized. LLOYD ESPENSCHIED.

merican Telephone and pany, 15 Dey Street,

wireless telephony ished ract. Observers Earfel Tower in Paris eech sent out by enginerican Telephone and ipany from apparatus hat company and inigton, Va. The equipathat employed a few alking by wireless tele-rancisco and Honolulu employed at Arlington e United States Navy which was placed at the American Telephone Company's engineers surtesy of the departant

f the announcement of eless telephony from dare Island, Panama, d Honolulu on Sept. Carty Chief Engi-American Telephone Company, made the that the achievemplished demonstrated of transatlantic wire-from Washington or London, Paris, and capitals. He stated t for the conditions of 1 Europe, the accompransatlantic wireless jid undoubtedly have 1ch more difficult feat to Honolulu. f the announcement of

esy of France.

ment that speech has transmitted from Arrvers stationed at the aris, marks the conchapter in the exaken by the American Telegraph Company.
rty's engineers comon the long-distance
one experiments, obselving apparatus were
Panama, San Diego,

iirts lade

nported shirtised. it it was found

tmakers made espect to the

ion might per-

t or stiff cuffs.

West 34th St. r Waldorf-Astoria



SPALDING

TRIANGLE PLAYS



LILY cups those nice individua you see in the theatres are available for use in your own office

LABORATORY OF THOMAS A. EDISON

OFFICE OF
MILLER REESE HUTCHISON, E.E., PH., D.
CHIEF ENGINEER

ORANGE, N.J., Dec. 1st, 19 15.

Mr. C. L. Clarke, General Electric Co., Schenectady, N. Y.

My dear Mr. Clarke:

I take pleasure in forwarding you, under separate cover, a duplicate of the Edison Diamond Disc Phonograph Record which made the opening address to Mr. Edison in San Francisco over the Transcontinental Telephone, on the evening of October 21st, 1915, from the Edison Laboratory, Orange, N. J.

On the reverse side will be found the record by Miss Anna Case Which, after being "played" to Mr. Edison by our Laboratory phonograph was in turn "played" by the machine in San Francisco.

Please accept this record with our

compliments.

If you have no Edison Diamond Disc Phonograph, any of our dealers will be glad to "play" this record for you.

Yours sincerely

Chief Engineer to and

Personal Representative of

Mr. Edison.

FMS

Schenectady, N.Y. December 9th, 1915.

Mr. M.R. Hutchison, Chief Engineer, Laboratory of Thos. A. Edison, Orange, N.J.

Dear Mr. Hutchison:

I have received the Edison Diamond Disc phonograph record of the telephonic communication between Mr. Edison in San Francisco and his friends who met in his Laboratory on the evening of October 21st to celebrate the 36th Anniversary of the invention of the incandescent lamp. I shall highly prise this momento of the occasion and thank you very much for the same.

Although the record was received several days ago,
I note that Mr. W.S.Andrews has not yet received one, of which I
know you will be glad to be informed because Mr. Andrews was one
of Mr. Edison's very early associates at Menlo Park in the latter
part of 1879 and continued for years with the Edison Electric
Light Company until its interest were merged in those of
the later General Electric Company, with which he has ever
since been connected, being one of the Consulting Engineers here
and occupying the same office with me.

With best wishes, I remain

Sincerely yours,

LABORATORY OF THOMAS A. EDISON

OFFICE OF
MILLER REESE HUTCHISON, E.E., PH., D.
CHIEF ENGINEER

ORANGE, N.J., Dec. 10, 1915.19

Mr. Charles L. Clarke, General Electrical Co;, Schenectady, New York.

My dear Mr. Clarke:

I am in receipt of your letter of December ninth, and am exceedingly obliged to you for calling my attention to the fact that Mr. W. S. Andrews did not receive one of the records.

I am instructing that one be sent to him as soon as we get a few more off the press, accompanied by a letter.

With my kindest regards, I remain,

Yours sincerely,

Chief Engineer to

Thomas A. Edison

Schenectady, N.Y. October 23rd, 1915.

Mr. Wm. H. Meadowcroft, Sec'y Edison Laboratory, Orange, N.J.

My dear Mr. Meadoworoft:

the opportunity of being present at the Laboratory with the old Edison boys on the Evening of October Elst to listen to the telephonic conversation, etc. between the Laboratory and Mr. Edison in San Francisco.

and the results quite astonishing in spite of the fact thatwo old fellows are quite accustomed to seeing the seemingly impossible accomplished. I shall expect to receive in due season one of the phonographic records of the telephone talk that evening.

the same Office in the Consulting Engineering Department here, and otherwise are in close touch in regard to our various affairs, I know that he did not receive an invitation to be present on the occasion. This, I am sure, occurred through some accidental circumstance. Therefore, although he was not in a position to be present. I am taking the liberty, without telling him anything about it

of asking whether it may not be possible to do him the favor of also receiving one of the phonographic records when ready for distribution, which I know he would most highly appreciate.

Yours very truly,

CONSULTING ENGINEERING DEP'T.

CLC:BR

THOMAS A. EDISON, ORANGE, N. J.



Mr. Charles L. Clarke,
Consulting Engineering Department,
General Electric Company,
Schenectady, N. Y.

Calle Address "Edison, New York"

From the Laboratory Thomas A. Edison, Orange, N.J. oct. 25th. 1915.

Mr. Charles L. Clarke, Consulting Engineering Dept., General Electric Company, Schenectady, N. Y.

Dear Mr. Clarke:

I am in receipt of your esteemed favor of the 23rd instant, and am very glad to learn that you spent such an enjoyable evening at the Laboratory on Thursday last. Much to my regret, there was very little opportunity of spending a little time with my old friends, but I hope we shall meet again when there is a little more time to have a chat over old times.

Mr. Hutchison and I are chagrined to think that Mr. Andrews did not receive an invitation, and for my part I wish you would express to Mr. Andrews my great regret. The trouble is that the whole thing was done in a tremendous rush, in fact, it was all done in four or five days, and under such circumstances, it was inevitable that some names would be overlooked. It is a shame to confess it, but such is the fact. I hope Mr. Andrews will kindly forgive me.

Both you and he will receive one of the phonographic records containing the telephone talk and the musical selection which was played to and from San Francisco.

With kindest regards to you and Mr. Andrews, I remain,

Yours very truly,

Walleadowaroff,



for pont. Latest photograph of Thomas A. Edison taken in his workshop at East Orange. The inventor's right hand rests on a phonograph tester.

Copyright, Press Illustrating Co.

The Sun, New York, Dec. 3,1916

of

Thomas A. Edison, Inc.

ORANGE, N.J.

January 17th, 1917.

Mr. Charles L. Clarke, c/o General Electric Co., Schenectady, N.Y.

Dear Sir:

Mr. Edison's 70th Birthday will be on Sunday, February 11th, 1917, and his Employees and Associates will celebrate the occasion at a dimer to be given in the Edison Storage Battery Building, West Orange, New Jersey, on Saturday, February 10th at 6:30 o'clock in the evening.

In behalf of the General Committee we take pleasure in extending to you a cordial invitation to be our guest on this occasion, and trust we may be honored by an acceptance from you.

Kindly advise Mr. W. H. Meadowcroft at the Laboratory as to this.

Come in your business clothes, just as you are.

Yours very truly,

For The Committee of Arrangements.

N. C. Durand.

P. Sutcliffe.

RETURN IN 5 DAYS TO

Thomas A. Edison, Inc. Orange, N. J. U.S.A.



Mr. Charles L.Clarke,

c/o General Electric Co.,

Schenectady, N. Y.

Consulting Engineering Deht, General Electric Company, Schenectady, N. J., January 22, 1917.

Mr. W. H. Meadow croft, Edison Laboratory, Drauge, N. J.

My dear Un. "Meadower oft:

I am very pleased to be remembered by invitation to the dinner and celebration to mark the 70 the britishay of Mr. Edison,

It is my intention and expectation to be present on that occasion, and your in the festivities, not forgetting the congratulations that are his due, and which he has so notably earned by a long life of large achievements won by continuous application and hard swork,

Sincerely yours, Chas, Llelanks.

at Menlo Park, N. J., Feb. 1, 1880.

January 23, 1917.

Charles L. Clarke, Esq.,
General Electric Company,
Schenectady, New York.

My dear Clarke:

I was very much pleased to receive your letter of January 20th, even though it was prompted by your noticing in the Electrical World a reference to the death of my good friend, Mr. H. G. Stott.

Mr. Stott lived near enough to us in New Rochelle
to be called a neighbor and I saw a great deal of him as we
came in on the train to New York together nearly every morning.
Our families also were on quite intimate terms. The ultimate
cause of his death was, no doubt, arterio-sclerosis, as he has
had very high blood pressure for some years past, running up
as high as 200 - 220 mm. He has been ailing for some years,
culminating during the summer in an operation for appendicitis,
and as he had been suffering from gall stones for some years
past his gall bladder was removed at the same time. He never
fully recovered from the shock of the operation, and some of
his worriments incidental to the strike in New York no doubt
hastened his taking off.

He was indeed a fine fellow and much respected, although he did not get much good out of life, as he took things

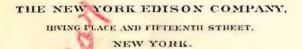
too seriously and could never throw off his responsibilities.

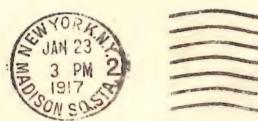
I congratulate you on being able to keep your own arterial tension down to 128 mm. which to say the least is a wonderful performance at sixty-four years. My own blood pressure is in the nieghborhood of 150, at any rate that was the last test, almost a year ago however.

I am very glad indeed to note that you will be at the Edison dinner, for which we in New York are working on a little surprise for the "old man".

With kindest regards and most pleasant anticipations of meeting you again, I am

Sincerely yours,







Charles L. Clarke, Esq.,

General Electric Company,

Schenectady,

New York.

Cable Address "Edison, New York"

From the Laboratory

Thomas A. Edison,

Orange, N.J. Feb. 6, 1917.

Mr. Charles L. Clarke, % General Electric Co., Schenectady, N. Y.

Dear Mr. Clarke:

This is to advise you that our invited guests for the Edison Birthday

Dinner on Saturday of this week, will please come direct to Mr. Edison's Library in the

Laboratory Building at about 6:00 o'clock, P.M.

When all are assembled we will go over together to the Dining Room with Mr. Edison.

Yours very truly,

WH Measowasff

LABORATORY OF THOMAS A. EDISON ORANGE, N. J.



Mr. Charles L. Clarke,

c/o General Electric Co.

Schenectady, N. Y.



Testimonial Dinner

tendered to

Thomas A. Kdison

by his Employees

in honor of his

Sebentieth Birthday

Saturday Bbening, February Tenth

Mineteen Hundred and Sebenteen

in the

Edison Storage Battery Building West Grange, N. I.

Peacure Punt by the sources

The Edison Monthly



Thirty-five Years Ago at the Age of Thirty-five, Thomas Alva Edison Established the Present System of Electric Lighting for New York. The Great Inventor will Celebrate the Seventieth Anniversary of his Birth on February Eleventh

EDISON, 70, DINED BY 1,800 EMPLOYES

Stands Smiling in Glow of Electric Candles on Cake as He Is Cheered Five Minutes.

WILSON SENDS A GREETING

Inventor Has Toastmaster Read Note Saying He Is Working Hard for His "Uncle Sammy."

Special to The New York Times. ORANGE, N. J., Feb. 10 .- Standing before a great birthday cake aglow with eventy electric candles in the Edison Storage Battery Building in West Grange, Thomas A. Edison tonight smillingly faced 1,800 employes of the various Edison enterprises and waited for nearly five minutes while they cheered and shouted their congratula-tions because he had reached life's three-score-and-ten milestone. It was a wonderful testimonial to Edison, the manufacturer, by the men who are under him, and elaborate had been the preparations made to turn one entire floor of the factory into a great dining hall in Mr. Edison's honor.

Mr. Edison will be 70 years old tomorrow, but today he received congratulations from every part of the world. He sat under crossed American flags with his son Charles on one side of him and his wife on the other. Henry Ford sat on the other side of Mrs. Edison, and ranged along the guests' table were many of Mr. Edison's business associ-ates. The long room was decked with flags and the lighting so arranged that it was reflected from the ceiling, leaving the hall brilliantly lighted and yet without shadow. In front of Mr. Edison

without shadow. In front of Mr. Edlson on a smaller table rested the birthday cake, a wonderful creation surmounted by a Liberty Statue holding aloft an electric torch.

There were no set speeches, at Mr. Edlson's request, but William Maxwell, the toastmaster, saw to it that some form of entertainment was going on all the time. The guest of honor made no remarks, but in response to a request for a birthday message he wrote upon a slip of paper and handed across the table this greeting: "I feel fine and I am werking hard just now for my Uncle Eaminy."

The President's Greeting.

Among the letters read was one of regret from President Wilson. The President sent this greeting:

"I wish with all my heart that I might be present to take part in celebrating Mr. Edison's seventieth birthday. It would be a real pleasure to be able to say in public with what deep land genuine admiration I have followed and genuine admiration I have followed

his remarkable carear or moun was an undergraduate at the university when his first inventions captured the imagination of the world, and ever since then I have retained the sense of magic which what he did then created in my mind. He seems always to have been in the special confidence of Nature herself. His career already has made an indelible impression in the history of applied science, and I hope that he has many years yet before him in which to make his record still more remarkable."

has many years yet before him in which to make his record still more remarkable."

There was a reception in the library of the laboratory building before the ainner at which Mr. Edison met and exhanged pleasantries with friends. Here he was joined by Mrs. Edison, and with her walked to the storage battery building. On their arrival at the dining hall, the inventor and his wife took seats near the outer door, and there remained until the guests had entered. There was no zonfusion in seating the great number of diners. The guests were seated at a long table along the western wall. Multi-colored lights were arranged in the order of the spectrum from end to end of the hall.

As Mr. Edison and his wife entered the Edison employes' band struck up. "Hail to the Chief!" and the cheering began. It lasted during all the time the guests of honor were marching to their places, and continued until the toastmaster began the reading of messages. Mr. Edison finished his soup and, leaning back in his chair, lit one of the long-stemmed pipes that were on the table. He kept his pipe going during most of the evening. The ban was placed on cigars and cigarettes, and each diner found a pipe and plenty of tobacco awaiting him.

"70" in Blue Electric Lights.

"70" in Blue Electric Lights.

"There will be no speechmaking to-night," announced the toastmaster, and the enthusiastic applause that followed was led by Mr. Edison.

This announcement had just been made when there flashed into light

This announcement had just been made when there flashed into light above the guest table "70" in blue electric lights.

"Let us drink a toast to Mr. Edison," shouted Mr. Maxwell, and, as all got to their feet, he continued: "There is no use wishing Mr. Edison happy returns. He will have them anyway. He is an institution, so I will say, Here's health to the biggest man in the United States and the best boss." Thereat there was more cheering, and the band struck up the "Edison Birthday March," especially composed and dedicated to Mr. Edison by Professor Frederick Campione.

"I would like John Opp, the oldest employe, to stand up," was the shouted request of the toastmaster. Mr. Opp got to his feet, and to get a better view so, too, did nearly all of the 1.800 present, and it was hard to identify the oldest employe. A toast was drunk to Mrs. Edison, "the only person whom Mr. Edison recognizes as boss, and whose watchful care is responsible for his youthful appearance." Again came volleys of cheering. The next toast was to Charles Edison.

"What is his for?" Mr. Edison asked his wife.

"Your son Charles," she replied, and Mr. Edison began waving his napkin with enthusiasm.

35,000 St. Louisians Send Message.

A photograph album and a book containing the best wishes of 35,000 persons in St. Louis were presented to Mr. Edigon. This was sent by the Governor of Missouri, who sent this message: "We hope you will continue the work you are doing for humanity."

The ceremony of cutting the cake was performed by J. W. Lieb, Vice President of the New York Edison Company.

This cake was sent by the employes of the New York Edison Company. It was forty inches in diameter or ten and a half feet in circumference. It was pravailed and had three decorative bands, the band around the base containing twelve plaques symbolic of Mr. I dison's inventions.

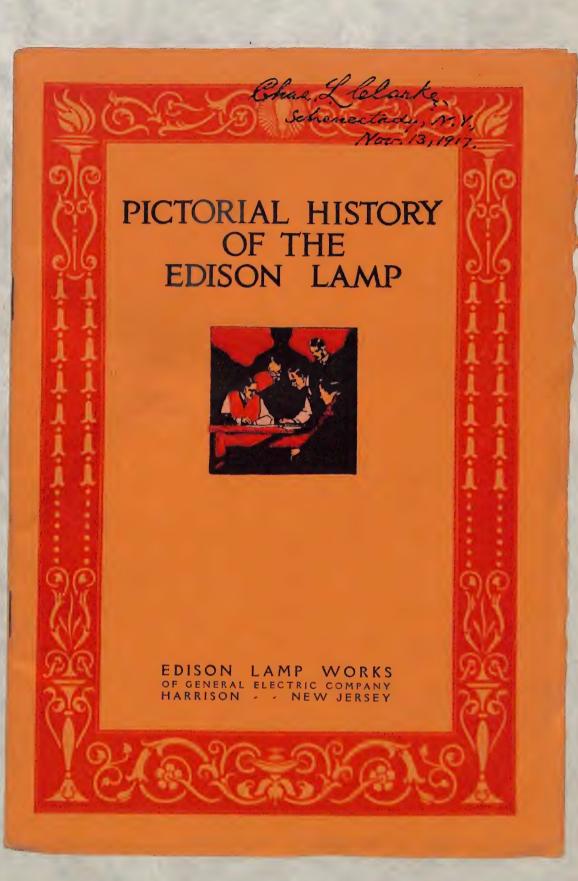
A concert and recitations closed the exercises, which lasted until a late hour.

"He may be old, but be still has some taining the best wishes of 35,000 persons

hour. "He may be old, but he still has young piege" was a song that won great ap-







BIRTHDAY PARTY TO EDISON:

Men Associated with Him in the Early 80s Organize the Pioneers.

Special to The New York Times.

ORANGE, N. J. Feb. 3.—In honor of Thomas A. Edison's seventy-first birthday, on Monday, Feb. 11, sixty of his old associates in the electric light field, during the period prior to 1885, who have organized the Association of Edison Pioneers, will sather in New York for a luncheon. Mr. Edison, who is engaged in Government work "somewheres in America," will be unable to attend

The pioneers, who organized recently at a meeting held in the Engineering Societies rooms, 29 West Thirty-ninth Street, New York, are composed of men who were with Mr. Edison at Menio Park, while others were the first members of his New York contingent of aids when he came to New York in 1880, when the old historic headquarters of the Edison Electric Light Company were at 65 Fifth Avenue. Francis R. Upton of Newark, Mr. Edison's oldest associate, has been elected President of the Pioneers. Other officers are: Vice Presidents, S. Z. Mitchell and T. Commerford Martin of New York; Secretary, Robert T. Lozler of New York; Treasurer, Fred A. Scheffler of New York; Historian, W. H. Meadowcroft of Orange.

'Other members of the association are:
Sydney B. Paine of Eoston, F. B. Potter
of New York, George F. Morrison of
Harrison, C. R. Benton, Fremont Wilson, W. J. Hammer, E. J. Hammer,
F. S. Smithers, L. E. Latimer of New
York, Schuyler S. Wheeler of Ampere,
S. D. Mott of Plainfield, M. F. Moore
of Roselle, H. M. Byllesby of Chicago.

Edison's Seventy-First Birthday.

February 11th, 1918.

Mr. Wm. H. Meadowcroft, Ass't., Laboratory of Thomas A. Edison, Orange, N. J.

Dear Mr. Meadowcroft:-

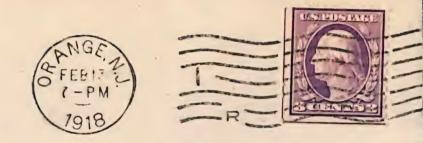
To-day is Mr. Edison's 71st birthday, and with congratulations on the event because it finds him in good health and vigor, and still looking ahead, I wish especially to felicitate him on the eagerness with which he is thus permitted to serve our country and the whole world in a greater way, and grander way, than ever feel to his lot before, - to help with his great ability to preserve and extend the cause of Human Liberty.

Sincerely yours,

(signed) Phas. Lebarto,

CLC: A

LABORATORY OF THOMAS A. EDISON ORANGE, N. J.



Mr. Chas. L. Clarke,

c/o General Electric Co.,

Schenectady, N.Y.

Cable Address "Edison, New York"

From the Laboratory Thomas A. Edison, Orange, N.J. Feb. 13,1918.

Mr. Chas. L. Clarke, c/o General Electric Co., Schenectady, N.Y.

Dear Mr. Clarke:

I have received your favor of the llth instant and have noted with much interest your remarks in regard to your hearing. I am sorry to learn that you are so deaf in your right ear. This must be since I saw you last, or else you used your left ear so well that the imperfection of the other one was not noticeable.

Your second letter containing congratulations to Mr. Edison has also been received, and I am sending it down for him to see for himself.

Yours very truly,

Way Meadow woff
Assistant to Mr. Edison.

A/4655.

LABORATORY OF
THOMAS A. EDISON
ORANGE, N. J.



Mr. Chas. L. Clarke, c/o G. E. Co.,

Schenectady, N.Y.

Cable Address "Edison, New York"

Thomas L. Clarke,
c/o General Electric Co.,
Schenectady, N.Y.

Dear Mr. Clarke:

I sent your favor of the 11th inst. down to Mr. Edison. He is a long way from here, working for Uncle Sam and will not return for two or three months.

I have just heard from him, and he wishes me to express to you his sincere thanks for your kind remembrance of his birthday and for the many good wishes that were expressed in your letter.

Yours very truly,

Wiffleavoweroff
Assistant to Mr. Edison.

A/4709.

R.15/1918

To The "EDISON PIONEERS":-

Several of Mr. Thomas A. Edison's old associates who were located at 65 Fifth Avenue, New York and elsewhere, (before and including the year 1885), have suggested that it would be a good idea to arrange a meeting of such associates who can be located, for the purpose of renewing old acquaintances and perhaps to form some sort of an organization which shall meet, say, once a year.

Please advise the undersigned if you are in favor of carrying out such a scheme and if you could attend the first meeting at the United Engineering Society Building, #29 West 39th Street, New York City, at 8:15 PM, January 24th, 1918.

If it is not possible for you to come, a letter from you to be read at the meeting would, we are sure, be very acceptable.

Sincerely yours,

Charles Wirt
William J. Hammer
Sidney B. Paine
Fred A. Scheffler

Dated January 2, 1918.

P. S. Please address reply to

Fred A. Scheffler 85 Liberty St., New York, N. Y.

Room 1124.

EDISON PIONEERS.

January 10th, 1918.

Mr. Fred A. Echeffler, 85 Liberty Street, New York City.

Dear Fred: -

I have the circular letter, of January 2nd, relating to formation of an organization of old associates of Edison, prior to 1886, first meeting to be held in New York, on January 24th.

This will surely prove a commendable move to all the old boys. Count me in. Will be in the first meeting surely if it is physically possible.

With best wishes,

Sincerely yours,

CLC: A

CONSULTING ENGINEERING DEPT.

January 16th, 1918.

Mr. Fred. A. Schoffler, Room 1134, 85 Liberty St., New York City.

Dear Sir: -

In reference to your circular letter to "Edison Pioneers", I am inclosing herewith a list of men who started to work in the Edison interests during or before the year 1885. The names are taken from the membership list of the General Electric Quarter Century Club. I am sending this list with the idea that it may be of some assistance to you in ferretting out all those who may be eligible for the "Edison Pioneers".

Yours very truly,

WSA: A

CONSULTING ENGINEERING DEFT.

NAME	ENGAGEMENT	PRESENT LOCATION.
Andrews, W. S.	1879	Schenectady
Bennett, J. C.	1885	New York
Berggren, E. J.	1880	East Orange
Branin, M. H.	1884	Harrison
Brown, F.	1884	Schenectady
Callshan, D.	1883	Bloomfield
Clark, W. S.	1885	Scheneotady
Clarke, C. L.	1880	Scheneotady
Cloud, J. C.	1884	Philadelphia
Corson, H. H.	1884	Nashville
Culver, W. S,	1885	Cincinnati
Diehl, J.	1884	Schenectady
Dwyor, J.	1883	New York
Fuller, A. B.	1885	Scheneotady
Hansen, I. A.	1883	Harrison
Holtzer, F.	1880	Harrison
Howell, J. W.	1881	Harrison
Kaler, C. H.	1881	Scheneotady
Keltsch, C. F.	1884	Harrison
Leephart, C. J.	1883	Schenectady
Lemp, H.	1881	Erie
Long, N. M.	1879	Harrison
Madgaitusku McGarrett, W.	1882	Harrison
Mulcay, E. H.	1873	Few York

CONT.

NAME	ENGAGEMENT	PRESENT LOCATION
Mullen, E. D.	1883	Phildelphia
O'Connell	1878	Harrison
Parkes, J.	1883	Philadelphia
Peterson, C. F.	1885	Schenectady
Prenties, I. R.	1881	Philadelphia
Rach, C.	1881	Schenectady
Reiger, G.C.	1883	Harrison
Righton, F.	1883	Schenectady
Table ed. T.	1883/	Schennotaly
Smith, C.	1884	Schenectady
Stoll, T.	1882	Harrison
Strittmatter, F.	1885	Bloomfield
Tanio, E. H.	1883	Schenectady
Thurnauer, Ernest	1885	Paris
Tournier, J.	1881	Schenectady
Van Deventer, T.	1883	Schenectady

EDISON PIONEERS.

January 23rd, 1918.

Wr. Fred A. Scheffler, 35 Liberty St., New York City.

My dear Fred:

To-morrow, the first meeting of the Edison Pioneers, old associates of Mr. Thomas A. Edison, (affectionately, "The Old Man") will be held in New York and no doubt many of "The Boys" will be able to gather then and there, impelled by pure, unselfish sentiment - of a nature far above the daily impulse, and practical worldly necessity, of gathering up dollars and cents.

common cause - the creating of new arts and manufactures, in the doing of which a small advance line of adventurous and enthusiastic spirits followed their masterful leader into the wilderness of nature's laws and materials, and assisted him in coordinating them finally for a new an enormous benefit to mankind. The hopes, the disappointments, the failures, and new struggles to succeed, at a time, too, when the quest was largely looked upon as a hopeless pursuit for a will-o-the-wisp, could

hardly fail to make them brothers through final success, as time has demonstrated in the case.

It is fitting these pioneers should meet to warm up the old spirit once theirs, and cheer the life remaining with the nobility of true sentiment, poetical, if you please, in this now rather too materialistic world.

I wish it were feasible to be with you in person, at this first gathering, but the season of the year, the long distance and uncertainty of trains, also business and war conditions in several ways make it impracticable. But I shall be with you in spirit and in closing let me toast:

"Many more happy and useful years
To Edison and Edison Pioneers. "

Sincerely yours,

Thus. L. Celarko.

CLCA

"RDISON PIONENES."

My dear Charles,

replies to the above circular that a printing machine is necessary to make satisfactory answers.

I merely wish tostate here that the meeting on Jan.34th was attended by 27 old Edison scouts sho were all enthusiastic and delighted to meet each other - some of whom had not met for 34 years.

we fully looked forward to your valuable presence and greatly regretted you could not come.

The 35 year (or older) baby was born and christened "Edison Pioneers."

The Officers elected were:

Francis R.Upton, President S.Z.Mitchell, Vice-President T.C.Martin, " " R.T.Losier, Becretary V.H.Meadowcroft, Historian Fredk. A. Scheffler, Treasurer

It was unanimously voted to have a Luncheon in New York City (place and time to be determined later) on Edison's birthday. Monday. Feb. 11th next; and we expect everybody will make a special effort to be present.

per annum, payable in advance. (Sond remittance to the writer).

Another resolution was passed fixing up to and including the year 1885 for qualification as to membership and each member is asked to at once prepare a brief statement as to the date he became associated with Edison in any way, at 65 - 5th Avenue, Menlo Park, Oberck Street Shops, Bergmann or any other place, and to outline what his specific duties were, relate any incidents of interest and what his present occupation is. This statement to be mailed to -

Robt. T. Lozier, Secretary, #37 Liberty Street, Boom 1902, New York City, R. T.

Notices of arrangements for the Lunchenn will be sent in a few days.

Faithfully yours,

185 Liberty Street, Hoom 1184. New York City, N.Y. Predertok A. Boheffler.

PRESIDENT
FRANCIS R. UPTON
VICE PRESIDENTS
S. Z. MITCHELL
T. COMMERFORD MARTIN
HISTORIAN
WILLIAM H. MEADOWCROFT

EDISON PIONEERS

1870 - 1885

TREASURER
FRED'K A. SCHEFFLER
85 LIBERTY STREET
NEW YORK
SECRETARY
ROBERT T. LOZIER
37 LIBERTY STREET
NEW YORK

2/6/16.

February 5, 1918.

Mr. Chas. L. Clarke, General Elec. Co., Schenectady, N. Y

Dear Mr. Clarke:-

In response to the circular letter of January 28, 1918, twenty-eight of the original Edisonians met and organized an association to which has been given the name of

EDISON PIONEERS.

It was decided that the qualifications for membership are to be as follows:

Those who were associated with Thomas A. Edison up to and including the year 1885, and to include telephony, telegraphy, electric light and power, the phonograph and other Edison activities.

The following officers were elected: President, Francis R. Upton; Vice Presidents, S. Z. Mitchell, T. Commer-ford Martin; Treasurer, Frederick A. Scheffler; Secretary, Robert T. Lozier.

There is to be no initiation fee,

The annual dues are to be \$5.00.

By vote of the Organization Committee you are invited to become one of the Founder Members.

Yours respectfully,

Secretary.

EDISON PIONEERS

THE EDISON PIONEERS WILL MEET FOR THEIR FIRST REUNION AND LUNCHEON ON

THE 71st BIRTHDAY OF

THOMAS A. EDISON

AT

THE LAWYERS CLUB

115 BROADWAY, NEW YORK CITY

ON MONDAY, FEBRUARY 11TH, 1918.

PRICE \$2.00 R.S.V.P. (IMMEDIATELY) MAIL ACCEPTANCE AND CHECKS TO FREDERICK A. SCHEFFLER, TREAS. 85 LIBERTY STREET

ROOM 1124

NEW YORK, N. Y.

e Electric Co., enectacly, IV. Y., 6, 1918.

Edison Proneers. 85 Liberty Street, Elew York City.

Dear Fred:

Secretary "Bobbie" Lozier, that there will be a dinner meeting of the old boys - Edison Princers - in New York, on the 11th, Edison, 71st birthday, and have a \$2.00 ticket & paid dinner, also that accorded dues cere \$5.00.

all right for the dues and herewrite is check for the \$5,00. But in those more times, with Hoover metaling out, Jam afraid and must shy at the \$2,00 dinner; it is too extravagent.

But seriously, I can't be present and have the great pleasure of getting near enough to hear everybody pass by his first name, and hear those dear employeeour sounds, like teal neelody, he selso with the tean summeries of how we forced and played together like heather, and worked, and feared, and dared with success sunder Edison to lead us "over the top" not what was there "no mains land". There was barbed wire appenty then to pash through, and meny a time we got hung up for a while, but finally got through route day

The New York Tours EDISON, 71, HONORED BY OLD ASSOCIATES "Edison Pioneers," at Luncheon, Express Their Pride in Inventor's Patriotic Occupation.

The "Edison Ploneers," an organiza-The "Edison Pioneers," an organiza-tion composed of the oldest associates of Thomas A. Edison, gav a luncheon at the Lawyers Club yesterday in celebra-tion of the seventy-first birthday of the inventor. Mr. Edison, who is engaged in important Government service, was In important Government service, was unable to be present. According to announcement made by the Chairman, Francis 'R. Upton, Mr. Edison was "Somewhere in America."

After the luncheon the following massage was sent to Mr. Edison:

"c, the Edison Pioneers, assembled of our first annual luncheon to cele-

at our first annual luncheon to cele-brate your birthday, express our pride in your present patriotic occupation and send you our warmest love and bearty congratulations on this auniversary. "Speaking of the work accomplished by Mr. Edison, Mr. Upton, who was asso-ciated with the inventor as early as 1870 and worked with him in the solution of his early problems, said: "I consider it no sacrilege to say that I think the genius of Mr. Edison is God-like in its intinite patience and indus-try."
Those at the luncheon were.

Those at the luncheon were

Those at the luncheon were:

Wisen Howell,
E. U. Latimer,
E. V. Hammer,
E. V. Hammer,
Frank A. Wardlaw,
S. Z. Mitchell,
A. D. Kibble,
W. J. Hammer,
W. M. Brock,
A. S. Peves,
W. H. Mesdowcroft,
F. R. i Dton,
T. C. Martin,
Alfred O. Tate,
Alora Mingle,
Lakin W. Howell,
W. E. Cilmere,
F. S. Hastings,
This was the fiirst luncheon of the
Eddison Pioneers,
Tomes as a step toward
bringing together the most active influences in the electrical world.

ELECTRICAL EXPERIMENTER Vol. 5, whole No. 60. April, 1918

"Edison Pioneers"

N Jan. 2, 1918, a call signed by Messrs. Frederick A. Scheffler, Charles Wirt, Sidney B. Paine and William J. Hammer was sent to many of Mr. Edison's earliest assistants and associates requesting those who had entered his service before and including the year 1885, to attend a meeting at the Engineering Societies' Building, New York City, on the evening of January 24, 1918, with a view to effecting a permanent organization. The forming of such an organization had often been broached by the men who had been intimately associated with Mr. Edison and his interests at his famous Menlo Park, N. J. Laboratory, 65 Fifth Ave., (New York headquarters of the Edison Electric Lighting interests), the Edison Lamp Works, Machine Works, Underground Tube Works, and the various other commercial, engineering and manufacturing interests connected with Mr. Edison's electric lighting, telegraph, telephone, phonograph, electric railway and other interests in this country and abroad, and on Jan. 24, twenty-eight of Mr. Edison's early associates, shown in the accompanying illustration, met in the Board Room of the American Institute of Electrical Engineers, thru the courtesy of the Institute, and took the initial steps to form an organization to be known as "Edison Pioneers."



Thomas A. Edison and Miller Reese Hutchinson, His Chief Engineer, at a Meeting. Mr. Hutchinson Epitomizes the Proceedings and Taps a Report in Morse on Mr. Edi-son's Knee.

Many letters were read which had been received by men entitled to belong who were unable to be present, and who one and all approved of the movement and wished to be included. Others wrote requesting that the line of demarcation be drawn at various dates subsequent to 1885 so that they might be included, but it was decided that as perhaps one million persons have been connected directly or indirectly with Mr. Edison's various interests here and abroad, it was essential that the organization should at present be limited to the very earliest of those connected with the inventing, developing and commercializing of Edison's inventions, and later on taking in on some basis certain men whose work has been of most importance in Mr. Edison's later spheres of usefulness, such as the storage battery, moving pictures, etc., etc.

storage battery, moving pictures, etc., etc.

The following officers were elected: President, Francis R. Upton; vice-president, Samuel Z. Mitchell and T. Commerford Martin; secretary, Robert T. Lozier; treasurer, Frederick A. Scheffler; historian, William H. Meadowcroft.

Various committees upon organization, constitution and by-laws, etc., were appointed, and a telegram was sent to Mr. Edison apprising him of the formation of the "Edison Pioneers", and after indulging in (Continued on page 857)

6, H. A. Campbell; 7, Frederick D. Potter; 8, George G. Grower; 9, Frank A. Wardlaw; 10, Christian Rach; 11, E. W. Kiddle; 12, Sidney B. Paine; 13, F. S. Smithers; 14, Robert T. Lozier, Sec'y; 15, T. E. Crossman, Stenog. Around Table—16, E. W. Hammer; 17, Wilson S. Howell; 18, Charles S. Bradley; 19, Fremont Wilson; 20, Fred'k A. Scheffler, Treas; 21, S. Z. Mitchell (V.-Pres.); 22, Peter Weber; 23, William J. Hammer; 24, Francis R. Upton, Pres.; 25, Cammerford Martin, V.-Pres.; 26, S. D. Mott; 27, William Carman; 28, E. H. Latimer.

PRESIDENT
FRANCIS R. UPTON
VICE PRESIDENTS
S. Z. MITCHELL
T. COMMERFORD MARTIN
HISTORIAN
WILLIAM H. MEADOWCROFT

EDISON PIONEERS

1870 - 1885

TREASURER
FRED'K A. SCHEFFLER
85 LIBERTY STREET
NEW YORK
SECRETARY
ROBERT T. LOZIER
37 LIBERTY STREET
NEW YORK

May 3, 1918.

Mr. Charles L. Clarke,
Consulting Engineer,
General Electric Company,
Schenectady, N. Y.

My dear Charles,

I have your favor of the 1st instant. Several other parties have written me in regard to the April issue of the "Electrical Experimenter" in which the article by our friend, Billy Hammer, appeared. The author gave the list of names of the Edison Pioneers from memory, as he did not have a complete list, and he made a mistake in doing this because it ought to have been done properly and the names of all of the members printed. I can assure you, however, that you are a full-fledged founder member of the association, and the fact that you did not receive any acknowledgement or receipt for the check for five dollars you sent does not signify anything except that I have been too busy with war work and other matters to acknowledge the many checks received. However, I presume you got your cancelled check back, which shows that it was deposited O.K. to the account of the association.

With kind regards, believe me to be,

Sincerely yours,

Fred Scheffeer

THE PRESIDENT AND BOARD OF DIRECTORS OF

THE AMERICAN INSTITUTE OF ELECTRICAL ENGINEERS

ANNOUNCE THE AWARD OF THE

EDISON MEDAL

BY THE EDISON MEDAL COMMITTEE TO

JOHN JOSEPH CARTY

Colonel, Signal Corps, United States Army. Doctor of Engineering (Stevens). Doctor of Science (Chicago). Doctor of Science (Bowdoin). Doctor of Laws (McGill). Edward Longstreth Medalist. Franklin Medalist. Imperial Order of The Rising Sun. Imperial Order of the Sacred Treasure of the Meiji

Edison Medal Presentation.

kindly advise the Committee if it may reserve a special

seat for him at the Edison Medal Presentation to Colonel John J. Carty at the Engineering Societies Building, 29 West 39th Street, New York, on Friday evening, May 17th, 1918, at half past eight o'clock.

Reply should be addressed to F. L. Hutchinson, Secretary, American Institute of Electrical Engineers, 29 West 39th Street, New York City.

OF

E

INEERS

ON FRIDAY EVENING, MAY THE SEVENTEENTH NINETEEN HUNDRED AND EIGHTEEN AT HALF PAST EIGHT O'CLOCK.

EDISON MEDAL COMMITTEE

CARL HERING, Chairman

 CARL HERING, Chairman

 C. A. ADAMS
 ROBERT LINDSAY

 FREDERICK BEDELL
 A. S. MeALLISTER

 B. A. BEHREND
 HAROLD PENDER

 CHARLES F. BRUSH
 E. W. RICE, JR.

 H. W. BUCK
 L. T. ROBINSON

 C. C. CHESNEY
 HARRIS J. RYAN

 W. C. L. EGLIN
 F. A. SCHEFFLER

 L. A. FERGUSON
 C. E. SKINNER

 BANCROFT GHERARDI
 J. FRANKLIN STEVENS

 GEORGE A. HAMILTON
 N. W. STORER

 F. L. HUTCHINSON
 S. W. STRATTON

COMMITTEE ON ARRANGEMENTS

GANO DUNN, Chairman
BANCROFT GHERARDI L. T. ROBINSON
HENRY A. LARDNER GEORGE F. SEVER

RECEPTION COMMITTEE

FREDERICK C. BATES, Chairman
OTTO B. BLACKWELL

EDWARD B. CRAFT

REGINALD L. JONES

GEORGE L. KNIGHT

LYMAN F. MOREHOUSE

RALPH H. TAPSCOTT

CLIFTON W. WILDER

PROGRAM

1. BUSINESS OF ANNUAL MEETING

REPORT OF DIRECTORS

REPORT ON ELECTION OF OFFICERS

2 PRESENTATION OF THE EDISON MEDAL

THE EDISON MEDAL

A. E. KENNELLY, Chairman Edison Medal Committee 1917.

JOHN J. CARTY

MICHAEL I. PUPIN, Chairman Engineering Foundation.

DELIVERY OF THE MEDAL

E. W. RICE, Jr.,
President American Institute of Electrical Engineers.

ACCEPTANCE OF THE MEDAL JOHN J. CARTY

EDISON MEDALISTS

1909 ELIHU THOMSON

1910 FRANK J. SPRAGUE 1911 GEORGE WESTINGHOUSE

1912 WILLIAM STANLEY

1913 CHARLES F. BRUSH1914 ALEXANDER GRAHAM BELL

1916 NIKOLA TESLA

OFFICERS AND BOARD OF DIRECTORS

AMERICAN INSTITUTE OF ELECTRICAL ENGINEERS

PRESIDENT E. W. RICE, JR.

JUNIOR PAST-PRESIDENTS

JOHN J. CARTY

H. W. BUCK

VICE-PRESIDENTS

B. A. BEHREND
P. JUNKERSFELD
L. T. ROBINSON

FREDERICK BEDELL

A. S. McALLISTER

JOHN H. FINNEY

MANAGERS

F. B. JEWETT JOHN B. TAYLOR HAROLD PENDER

CHARLES S. RUFFNER CHARLES ROBBINS E. H. MARTINDALE C. E. SKINNER JOHN B. FISKEN N. A. CARLE

WALTER A. HALL WILLIAM A. DEL MAR WILFRED SYKES

TREASURER
GEORGE A. HAMILTON

SECRETARY F. L. HUTCHINSON

HONORARY SECRETARY RALPH W. POPE

May 8, 1918.

Mr. 7, L Hutchiuson, Secretary, amer, nest, Electrical Engineera, 29 West Thirty-minete Street, New York City.

Dear Mr. Hutchinson:

In reply to the Kind incitation represents, on to attend the Edison medal Presentation, on the country of May 17 th, I shall be pleased to be present on that occasion.

That it will be far from home, and of and now somewhat of a countrymous, leads me to inquire whether a dress suit mile most properly be an règle. Frank Ky speak your mind, at your early convenience, and oblige, Your survey,

Chus, Helarke.

Consulting Engineering Debt.

PRESIDENT FRANCIS R. UPTON VICE PRESIDENTS S. Z. MITCHELL T. COMMERFORD MARTIN HISTORIAN WILLIAM H. MEADOWCROFT

EDISON PIONEERS

1870 - 1885

TREASURER FRED'K A. SCHEFFLER 50 CHURCH STREET NEW YORK SECRETARY ROBERT T. LOZIER 32 W. 40TH STREET NEW YORK

Newark, N. J., December 23, 1918.

EDISON PIONEERS.

DEAR FRIENDS:

Tuesday, February 11th, 1919, will be Mr. Edison's next Birthday; and under the Constitution and By-Laws of the Edison Pioneers, a meeting will be held on that day, of which formal notice will be sent, at which meeting I hope Mr. Edison will be present.

It was at the suggestion of Mr. Alfred Kiddle that he and Mr. Scheffler took up the question of getting out in permanent form the Constitution and By-Laws and making them attractive. I feel myself personally indebted to these gentlemen for loyal support and for suggestions.

You will be pleased to see that Mr. Edison has autographed each of his pictures. Mr. Meadowcraft was kind enough to get out a sufficient number to let each member have a copy.

Mr. Scheffler reports regarding our Historian, William H. Meadowcraft, as follows:

"Meadowcraft has not been able to proceed with the work he had in hand to which he was appointed at the first luncheon, namely, that of communication with each member to obtain historical data whereby he could write up the combined history of old associations and other matters of interest belonging to his office, because he could not get the papers from Lozier who was called away on account of the War to the Naval Aircraft Production Factory at Philadelphia, Pa. Lozier has just returned and swears by all that is good and holy that he will get these papers into Meadowcraft's hands in a few days.'

If any of the members can supply the Secretary with the names of men who should be members, he will be glad to communicate with them to see if they would not like to enroll.

We now have in the neighborhood of 79 members, some of whom are located all over the world, notably, Canada, England, France, Japan and British West Indies.

The Treasurer bought and paid for a \$100 Liberty Bond, 4th Loan, and including this there is an unexpended balance of about \$200.

The Committee, Hammer and Beves, for getting up suitable design for pin and certificate of membership, have been interfered with by the War. Major Hammer has been doing splendid work on the General Staff in Washington.

> "Thirty men, from twenty towns, Sires and grandsires with silvered crowns,— Thirty schoolboys all in a row,-Bens and Georges and Bill and Joe. "In thirty goblets the wine was poured, But threescore gathered around the board, For lo! at the side of every chair A shadow hovered-we all were there!"

-Holmes.

In sending a list of living Edison Pioneers a calling of the roll of a few of the shadows seems to me appropriate: Batchelor, Kruesi, Johnson, Hughes, Lowrey, Green, Villard, Goddard, Eaton, Coster, Wright, Fabbri, Chinnock, Force, Randolph, Marshall, Hipple, Holtzer, Stieringer, Barker, Brackett, Young, Rowland.

Yours in the Edisonian Bond,

FRANCIS R. UPTON,

President.

Mr. & Mrs. Thomas A. Edison
request the pleasure of EDISON PIONEERS
at their residence
Llewellyn Park, Orange, New Jersey
January 1st, 1919, from 2 to 7 p. m.
to meet
Mr. & Mrs. Chas. Edison

12/31/18





Mr. Charles L. Clarke,

General Electric Company,

Schenectady, N. Y.

the terrible war at an end and prospect of a long peace and useful prosperity in right. With Kind regards, ever Sincerely yours,

Mr. and Mrs. Thomas a. Edison, Llewleyn Park, Orange, N. T.

PRESIDENT FRANCIS R. UPTON VICE PRESIDENTS S. Z. MITCHELL T. COMMERFORD MARTIN HISTORIAN

WILLIAM H. MEADOWCROFT

EDISON PIONEERS

TREASURER FRED'K A. SCHEFFLER 50 CHURCH STREET

NEW YORK

ROBERT T. LOZIER

32 W. 40TH STREET

wark, N. J. Jan. 24, 1919.

1870 - 1885

Dear Friend.

The first Annual Meeting of the Edison Pioneers will be held at the Robert Treat Hotel in Newark, New Jersey, on Monday, February 10, 1919. Luncheon will be served at 12:30 P.M. sharp, and will adjourn at 2.30 P.M.

This hotel is best reached by the Manhattan Tubes from New York to Park Place, Newark, and is within two minutes' walk of the station. Trains leave for Newark every ten minutes.

The meeting is held on the day before Mr. Edison's Birthday. so as to give the members of the Edison Pioneers an opportunity to greet Mr. Edison and to shake hands with him on his way to the train at Newark for Florida.

For reasons that we all know, Mr. Edison is very much opposed to attend a formal function where he has to sit out any speech-making, so this plan has been arrived at to offer him the congratulations of the Edison Pioneers on his seventy-second birthday.

It is requested that each member bring with him a letter, addressed to Mr. Edison, setting forth the member's connection with the pioneer work of the early days, and also telling briefly what he is now doing. It is requested, if there is any need of recalling to Mr. Edison the member's identity when he shakes hands with him, that the member's name be also plainly written on the envelope.

If any member is unable to attend the meeting his letter should be promptly mailed to Mr. William H. Meadowcroft, c/o Mr. Thomas A. Edison, Orange, New Jersey, who will see that it reaches Mr. Edison. Mrs. Edison has promised to preserve all the letters so that Mr. Edison can read them at his leisure during his sojourn in Florida.

The cost of the luncheon is \$2.50 per member. Please mail your acceptance to Mr. Frederick A. Scheffler, 50 Church Street, New York City, with check. We hope that you will be able to attend.

If you have not as yet received the Edison Pioneers Year Book for 1918, which has just been mailed, please notify Mr. Scheffler at the above address, and he will see that you receive the same.

Yours in the Edisonian Bond,

Secretary

109 Glenwood Boulevard, Schenectady, N.Y., Feby. 6, 1919,

My dear Edison :

Thus I continue to greet you for the pake of old times, when no "Mister" had to be stuck in front of your name to distinguish you as a gentleman, and I have never discovered that it has been needed since, I magine, if you can, a Mister Faraday! Such a perfunctiony decoration (?) by me, to repeat the old phrase recently reapplied by the humerous Taft, "would make a horse laugh,"

But friendly pleasantry aside, nevertheless, with a loyal heart for your always here, I congratulate you sincerely on coming to your seventysecond birthday, February 11th, a cheery, elastic,
ambitious young man, Just as happy as ever
to be living and doing - which is enough said
of any man of your years, and fortunate are

those of whom it can be said,

The Speretary of the Edison Pioneers, "Bobbie" Logier, has said he would like the members to write you an account of their pioneer work in the early days, and tell briefly what they are now doing. It seems hardly necessary for me to recount the former. As to the latter, I am one of the so-called Consulting Engineers of the General Electric Company, with head-quarters at the Schenectacky office, and am as busy as in the old days - minus the old night work - especially on matters re-lating to research, new development and standardization, pursuit, much to my liking,

Digressing a little wite family affairs: Dam pleased at being happily married, for it is fifty - fifty, help one help the other write Mrs. Clarke and me. I have a son of thirty-two years, who is an A-1 electrician, mechanic and chewical engineer; another son of twenty years, second lientenant in the Officers' Reserve Corps, V.S. Army, who left Camp Lee with the Expert Rifleman bodge, and is now back at college in the junior class, and a married daughter of twenty - two years, whose busband, a physician, is at present a captain in the Medical Corps, caring for wounded soldier boys from "over there in a hospital in New York City.

You may be interested to Know that I am still rugged for sixty-six years and active—
yet enjoying outdoor life and "roughing it-"
My blood pressure is low-and heart-sound,
digestion and sleep good, But no more boarting!
In closing, I wish you a pleasant, restful

outing in your Florida home, a safe return, and continued good health and happiness With Kind regards to Mrs. Edison,

Faittfully yours,

Chas, Lelarke.

at-Menlo Park, 7ely, 1, 1880.

Mr. Thomas a. Edison, Orange, N.J.

Schenectady, 22.4., 7eb. 6, 1919,

Mr. Wru. H. Mederveroft. Edison Laboratory. Orange, N. T.

My dear Mr. Weadow croft:

Penclose herewith a letter for Mr. Edison

for his seventy-second builteday.

See here, young man, can't you get line to write me at least a note in his full autographic hand, say, from Florida? I appreciate the difficulty of it. I have only a few fugitive scraps in his hand, and those only endorsed "Ta", and some isolated signatures, but no note or letter with full sname to it,

Tohould like such a state or short letter better than pages of typewriting ahead of

Lis autograph.

I continue to send Mr. Suzuki, in Tapan,
Edisoria matter, and frequently hear from
lim, I just sent lim a copy of the
constitution and by-laws of the Edison
Pioneers, containing the fine Edison photoportrait with autograph. The biography
in Tapanese makes progress, and I trust it
will not be long before we see it.
Sincerely yours,

Char. L. Clarke.



RUSE LEADS EDISON TO BIRTHDAY PARTY

The Sun. Feb. 11. 1919.

Friends and Employees Get Him to Pose for Movies in Newark Hotel.

GIVES PROOF OF VIGOR

Many Gather to Congratulate the Great Inventor, Who Reaches 72.

Trapping Thomas A. Edison into attending his own birthday party is just ilke hunting a snark. It has to be done in fulleful and devious ways. And if he hadn't been going to Florida yesterday for a rest it is probable that those associartes of his younger days who call him master would have had to lunch without first shaking his hand and telling h m that at 72 he is the friskiest youngsker of them all.

So with the connivance of Mrs. Edi-So with the connivance of Mrs. Edison and his children he was spirited
away from Llewellyn an hour earlier
than he might have left to catch the
train in Newark, and when his car
pulled up in front of the Robert Treat
Hotel he was perfuaded to get out for
Just a minute. Then the half hundred
men who worked with him years ago
and are prouder of it than of most of
their accomplishments descended on him.
They payted him on the back and reminded him of things that had happened long ago when he was a young-

pened love age when he was a young-ster puziling over the phonograph and the electric light and the germ ideas of a hundyed other inventions which bear

Poses for the Movies.

He iposed for the movies, and when some ione couplimented him on his appearance he chuckled and holding the shirt of his coat out with one hand, shipds a leg in the most approved Broadway fashion. One put down a little justal bet that even if Thomas A. Edinori does work most of his waking hours, there must have been times when he danced with the best of them. Indeed he seemed inclined to try vesterday.

these must have been times when he danced with the best of them. Indeed he seemed inclined to try yesterday.

There were men from all ever the eastern part of the country there, each of them with a blue button in his coat lapel on which was Mr. Edison's name and the number of his years, a number which he defled. Some of them brought mementoes of the past, and one, T. Commerford Martin, had a picture and framed letter at which the inventor looked long. It was a picture of him self taken in 1878, when he was 31 years old, scated in front of his first experimental phonograph, a cumbrous cylindrical machine that spoke words.

Recalls Old Invention;

Beside it was the reproduction of his signature in what looked like faded yellow ink, and it was not until one read the inscription over it that it could be seen this was just one of the many inventions this busy man has stumbled upon played with for a time and the upon, played with for a time and then forgotten in the press of bigger things. His name was written in a chemical ink, His name was written in a chemical ink, which raised the paper as the pen moved, making it possible for letters to the written which the blind could read. Some of the corrugations still remain after forty years, but Mr. Edison, never had time to develop his idea. Mrs. Edison, in a lull of merrymaking, gathered the old friends of her hysband about her in a big circle and asked them to send to her what remisulscences and mementos they could of

asked them to send to her what remi-infsecrees and mementos they could of this early days. She wants to gather them together in a collection that will ynake fascinating study some day for fone who wants to learn how much tone man can crowd into a lifetime. I Finally the handshaking came to an end, and watching his opportunity, Mr. c Edison slipped out into the hall. They fmade a rush after him like boys after

chalson shipped out into the half. They chade a rush after him like boys after a leader, and until he stepped into the relevator, shouted congratulations and torders to restrain his youthful enthusiasm while he is away.

Works Even in Vacation.

This is the first vacation Mr. Edison has had since the United States entered the war, and even now he is engaged in extensive research work for the Government, a subject on which he naturally will not talk.

the Government, a subject on which he naturally will not talk.

It developed afterward at the luncheon of the Edison Pioneers, as they call themselves youngsters who are eligible to membership if they worked with their master before 1885, that there is a new electrical star rising in the Edison family. This is Mr. Edison's son. Theodore, who was not old enough for active service when the war started, but who in the last two years has so applied himself to inventive work for the Government that he has already proved himself to have a mind of unusual creative ability. He was mentioned by the retiring president of the Pioneers, Francis Upton, who said:

"He has had his inventions approved by the Government. We are proud to speak of his inventive work, which has

by the Government. We are proud to speak of his inventive work, which has shown the utmost promise, and he has evidently inherited wonderful pertinacity in holding fast to a chosen line of work. I only wish I were permitted to tell more regarding his activities, but the results were certainly remarkable. His time for nearly two years was given almost entirely to inventive work.

Says Edison Is Sentimental.

An/I after that, when Theodore was And after that, when Theodore was noticed standing quietly at one side, apparently liaving inherited his father's desire for self-effacement in a public gathering, it was hard to believe that so you hful and shy a person could already have done the things to call forth such high praise. Mr. Upton also combated another favorite pronouncement of his cild companion.

"Our dear, great master, Edison, claims had sont sentimental," he said. "I know that he prides himself upon his practical dense, with which he is a leader among hense, with which he is a leader among hien. I beg to differ with him regarding his being sentimental. I think ne man has ever held more fully in taind the sentiment of making two blades of grass grow where one grew before. I contend that no man has ever had the sentiment for being useful to his fellow

men more than Edison."

Among those at the reception were John W. Lieb of the New York Edison Company, the new president of the Ploneers; Major W. J. Hammer, W. M. Brock, division superintendent of the Public Service Corporation; T. Commerford Martin of the National Electric Light Association; Wilson Howell, for a long time in charge of the Edison testing Light Association; Wilson Howell, for a long time in charge of the Edison testing bureau; Charles L. Clarke, designer of the first Edison station and chief engineer of the first Edison company: II. A. Campbell, Philip II. Kline, who came down from Montreal to see his old chief; A. E. Winchester, former general superintendent of the South Norwalk Electric Company; Mr. and Mrs. Charles Edison and C. A. Estabrook.

NEWS OF THE INDUSTRY

Chronicle of Important Events and General Activities in the Technical, Commercial and Manufacturing Fields Feb. 15.1919.

EDISON, 72 YEARS YOUNG, THE GUEST OF PIONEERS

Organization Gives Luncheon to the Inventor Before His Departure for First Vacation Since Beginning of Active War Preparations

To celebrate the seventy-second birthday of Thomas A. Edison, the Edison Pioneers gave a luncheon to the great inventor on Monday of this week at the Robert Treat Hotel, Newark. The anniversary of the inventor's birth was Tuesday, but he left for the South on



A SNAP SHOT OF THE EDISON SMILE

Monday afternoon. Edison was in fine spirits in greeting the "oldtimers" who were associated with him prior to 1886.

Francis R. Upton, retiring president of the Edison Pioneers, said in his tribute to Edison that the inventor has laid the foundation for many industries. Mr. Upton estimated that \$1,000,000,000 is invested in the industries which Edison created or for which he laid part of the foundation and that 1,000,000 employees are in these industries.

The following officers were elected by the Edison Pioneers: President, John W. Lieb; vice-presidents, S. Z. Mitchell and T. C. Martin; historian, William H. Meadowcroft; treasurer, F. A. Scheffler; secretary, Robert T. Lozier; executive committee members, F. R. Upton, Major W. J. Hammer and A. W. Kiddle.

After the luncheon Edison, with Mrs. Edison and other members of his family, left for Fort Myers, Fla., for his first vacation since this country began preparations to enter the war.

The History of the Incandescent Electric Lamp

By JOHN W. LIEB

Past President A. I. E. E. Past President N. E. L. A.

Past President N. Y. Electrical Society



A Brief Address to the Employees of the Edison Lamp Works General Electric Company

> 1919 HARRISON, NEW JERSEY February Sixth

The History of the Incandescent Electric Lamp By John W. Lieb

8

Mr. Chairman, Ladies and Gentlemen:

YOUR Chairman has warned me that in order not to interfere with the factory schedule I am allowed less than half an hour in which to present this rather large subject. It is needless to say that only a superficial and inadequate treatment may be expected in such a brief time and I shall therefore find it possible to present only a mere outline.

The birth of Electric Lighting dates from the year 1809, when Sir Humphrey Davey produced a brilliant electric spark from the voltaic batteries of the Royal Society. There followed a period of experimentation and research with the electric arc subjecting the carbon from gas retorts to the current produced by intensive grouping of battery cells. An immense impulse was given to research and experiment with the advent of that cheap and powerful source of current, the dynamo-electric machine.

Very soon after the voltaic battery became available, it appeared that a heavy electric current would heat and bring to brilliant incandescence metals in the shape of thin strips or wires, and platinum from its elevated fusing point became the material on which early inventors based their hopes for a new illuminant. Carbon also, from its high fusing point and high resistance, was among the promising materials, and experiments were made with carbon in plates, rods, and also pencils in almost wirelike attenuation, but never reaching the extreme tenuity of a "filament"; platinum wire, also, often alloyed with iridium, rendered incandescent in the open air and in glass globes, sometimes evacuated of air and sometimes filled with neutral gases—was the subject of endless researches and investigations. We have time in this connection to merely mention the names of a few pioneer workers and very briefly indicate their contributions to the progress of the art between 1840 and 1880.

Van Maru producing a very large frictional machine succeeded in raising platinum and metal wires to high incandescence.

Then Wollaston using a very fine platinum wire was able to raise it to bright incandescence with a single copper-zinc cell.

1841—Frederick de Moleyn patented a process for the production of incandescent lamps using platinum wire inside an exhausted glass chamber.

About this time De la Rue and Grove made experiments with wire of different substances.

The honor of having first substituted carbon for platinum is due to J. W. Starr, an American using plates of carbon inside a vessel containing a Torricellian vacuum. He associated himself with an Englishman named King and produced and patented in 1845 the Starr-King lamp—giving a demonstration with a candelabra of 26 of his lamps.

1846—William Greener and W. E. Staite produced a lamp much like Starr and King using carbon partly, also powdered lamp-black.

1848—Staite used strips of iridium or alloys of iriduim or platinum in horse-shoe form in an enclosing globe.

1849-Petrie used thin rods of iridium or its alloys.

1850—Floris Nollet produced incandescence from a charcoal rod inside of a glass globe. Wm. Martyn and John Roberts used plates of thin graphite.

1856—John Thomas Way made a lamp in which mercury was allowed to flow in a slender stream, the current volatilizing the mercury.

1858—Changy used platinum wires in the form of a spiral. A similar lamp was patented in the U.S. about this time by Samuel Gardiner and Levi Blossom.

1862—Morris Weare and Monckton produced illumination by passing electric discharges through vacuum tubes containing vapors or gases.

1873—The Russian Lodyguine made carbon incandescent lamps using needles of retort carbon terminating in blocks.

Subsequently improved by Kosloff.

1875—Konn produced a lamp like Lodyguine, with double carbons one consumed after the other.

1876—Appearance of the Boulyguine lamp with the carbon automatically fed upward as it was consumed.

These lamps can be said to be really semi-incandescent lamps of the types experimented with by Reynier, Werderman and Jablokoff, the latter producing the so-called Jablokoff candle which reached a considerable stage of development and practical application.

1879—Moses Farmer used a short horizontal carbon rod held between large metallic blocks mounted in an exhausted globe, and actually lighted a residence at Newport with 42 of his lamps.

These experiments conducted by a number of enthusiastic and tireless workers held much of promise and, could they have had from the beginning the convenient and potent source of electrical energy which the dynamo subsequently provided, the goal would probably have been reached much sooner.

On October 14, 1878, there appeared Mr. Edison's first invention in the field of electric lighting—a thermostatic regulator—for use in combination with a platinum iridium lamp to keep the current to a safe value by the insertion of a shunt resistance operated by the mechanical expansion of the incandescent conductor.

We have met today in the home, if not in the actual birthplace, of the Edison lamp and we are about to celebrate the 72nd Birthday of the creator of the art of electric lighting by incandescent lamps. These facts coupled with the altogether unique position which the name of Edison occupies in the history of incandescent lighting, justify us in giving special consideration today to the invention and development of the Edison lamp.

In launching into the field of incandescent lighting Edison did not proceed as others had done, who were at this time investigating and experimenting to find a practical solution of that *ignis fatuus* of the time—the subdivision of the electric light. Before him we found one group of investigators working at details of the lamp, another group at the development of the dynamo-electric machine, still another at regulating and controlling devices, etc. *He* started out with the broad conception of developing a complete lighting system in its every detail, based on the solid and broad foundation of the precedent established by the intensely practical and successful Gas Industry. Right from the very beginning he had ever before him this

broad conception and in carrying out the idea he planned a complete system beginning with the electric generators, giving consideration even to special types of boilers and engines adapted to drive them down to the lamp and other utilization devices, not omitting any of the innumerable details inside the station, such as ammeters, voltmeters, regulators, and switching gear, outside of the Central Station such as underground conductors, feeders, mains, junction, coupling and service boxes, and on the consumers' premises, service switches and cutouts, safety fuses, meters, wiring, and wiring devices, such as safety plugs, circuit switches, chandeliers, brackets, sockets, lamps, etc.

Let us now avail ourselves or Mr. Edison's own words, which he used some years ago, to describe the problem which he, in 1878, set out to solve:

"We soon saw the subdivision (of the electric light) never could be accomplished unless each light was independent of every other. Now it was plain enough that they could not burn in series. Hence they must burn in multiple arc. It was with this conviction that I started. I was fired with the idea of the incandescent lamp as opposed to the arc lamp, so I went to work and got some very fine platinum wire drawn. Experiment with this, however, resulted in failure, and then we tried mixing in with the platinum about 10 per cent of iridium, but we could not force that high enough without melting it. After that came a lot of experimenting—covering the wire with oxide of serium and a number of other things.

"I then took a cylinder of zirconia and wound about a hundred feet of the fine platinum wire on it coated with magnesia. What I was after was getting a high resistance lamp, and I made one that way that worked up to 40 ohms. But the oxide developed the phenomena now familiar to electricians, and the lamp short-circuited itself. After that we went fishing around and trying all sorts of shapes and things to make a filament that would stand. We tried silicon and boron, and a lot of other things that I have forgotten now. I never thought in those days that a carbon filament would answer, because a fine hair of carbon was so sensitive to oxidation. Finally, I thought I would try it because we had got very high vacua and good conditions for it.

"We sent out and bought some cotton thread, carbonized it, and

made the first filament. We had already managed to get pretty high vacua and we thought, maybe, the filament would be stable. We built the lamp and turned on the current. It lit up, and in the first few breathless minutes we measured its resistance quickly and found it was 275 ohms-all we wanted. Then we sat down and looked at that lamp. We wanted to see how long it would burn. The problem was solved—if the filament would last. The day waslet me see October 21, 1879. We sat and looked, and the lamp continued to burn and the longer it burned the more fascinated we were. None of us could go to bed, and there was no sleep for any of us for forty hours. We sat and just watched it with anxiety growing into elation. It lasted about forty-five hours, and then I said, 'If it will burn that number of hours now, I know I can make it burn a hundred.' We saw that carbon was what we wanted, and the next question was what kind of carbon. I began to try various things, and finally I carbonized a strip of bamboo from a Japanese fan, and saw that I was on the right track."

Let us now complete the picture by quoting from Mr. Edison's patent specification, which was the outgrowth of this successful experiment of October 21, 1879, the date universally recognized as the birthday of the commercial incandescent lamp, because this specification is couched in Mr. Edison's own language:

"The object of this invention is to produce electric lamps giving light by incandescence, which lamps shall have high resistance, so as to allow of the practical sub-division of the electric light. The invention consists in a light-giving body of carbon wire coiled or arranged in such a manner as to offer great resistance to the passage of the electric current and, at the same time, present but a slight surface from which radiation can take place. The invention further consists in placing such burner of great resistance in a nearly perfect vacuum to prevent oxidation and injury to the conductor by the atmosphere. The current so conducted into the vacuum bulb through platina wires sealed into the glass. The invention further consists in the method of manufacturing carbon conductors of high resistance, so as to be suitable for giving light by incandescence.

"Heretofore, light by incandescence has been obtained from rods of carbon of 1 to 4 ohms resistance and placed in closed vessels, in which the atmospheric air has been replaced by gases that do not combine chemically. The leading-in wires have always been large, so that their resistance shall be many times less than the burner, and, in general, the attempts of previous workers have been to reduce the resistance of the carbon rod. The disadvantages of following this practice are that a lamp having but one to four ohms resistance cannot be worked in great numbers in multiple arc without the employment of main conductors of enormous dimensions; that owing to the low resistance of the lamp, the leading wires must be of large dimensions and good conductors, and a glass globe cannot be kept tight at the place where the wires pass in and are cemented; hence the carbon is consumed, because there must always be a perfect vacuum to render the carbon stable, especially when such carbon is small in mass and high in electrical resistance.

"The use of gas in the receiver at the atmospheric pressure, although not attacking the carbon, serves to destroy it in time by 'air-washing' or the attrition produced by the rapid passage of the gas over the slightly coherent, highly heated surface of the carbon. I have reversed this practice. I have discovered that even a cotton thread properly carbonized and placed in a sealed glass bulb exhausted to one-millionth of an atmosphere, offers from one hundred to five hundred ohms resistance to the passage of the current, and that it is absolutely stable at very high temperatures; that if the thread be coiled as a spiral and carbonized, or if any fibrous vegetable substance which will have a carbon residue after heating in a closed chamber, be so coiled, as much as 2000 ohms resistance can be obtained without presenting a radiating surface greater than 3/16ths of an inch. I have carbonized and used cotton and linen thread, wood-splints, paper coiled in various ways, also lampblack, plumbago, and carbon in various forms mixed with tar and rolled out into wires of various lengths and diameters.'

Among the contemporary workers with Edison in developing the incandescent lamp may be mentioned William E. Sawyer and Albion Man, who took out their first patent June 18, 1878, for a lamp consisting of a two-part enclosing globe containing a low resistance pencil or carbon with a mechanism for feeding them as they were consumed and large spiral radiating conductors made hollow to permit of exhaustion of the air and the introduction of nitrogen gas.

In a subsequent modification the carbon rod was shortened, consuming the 8 inch pencil at the rate of 1/50th of an inch per hour, the feed pressure being exerted from below instead of from above, and a later patent of January 7, 1879 referred to depositing dense carbon by the "flashing" process and finally they formed carbons solely in this way.

Previous patents indicate that the lamps referred to had a resistance as low as .6 ohm and were therefore to be used for series and multiple series lighting and not for use in parellel, Mr. Edison's lamps for the latter purpose having a resistance hot of over 140 ohms.

Judge Bradley in a court opinion referring to the work of these two pioneers stated: "It seems to us that Sawyer and Man were following the wrong principle—the principle of small resistance in an incandescing conductor and a strong current of electricity and that the great discovery in the art was that of adopting high resistance in the conductor with a small illuminating surface, and a corresponding diminution in the strength of the current. This was accomplished by Edison in his filamental thread-like conductors, rendered practicable by the perfection of the vacuum in the globe of the lamp."

Hiram S. Maxim, another distinguished pioneer in this field, in 1877 constructed a platinum lamp with thermostatic regulator, which he operated from batteries and later by a dynamo, and in 1880-1881, he took out patents for a low resistance series lamp of the "stopper" or separable two-part globe type with carbons formed from paper, wood, or carbonaceous materials in a hydrocarbon vapor, and he stated "lamps of high resistance cannot well be used in any considerable number in series on account of the immense electro-motive force required for passing a current through their combined resistance, and it is one of the objects of this invention to provide an incandescent lamp adapted to be used in series and capable of giving a large amount of light."

Mr. (later Sir) Joseph W. Swan, in England, has been credited with having had a more correct idea of the path along which the successful solution of this problem of the subdivision of electric light would lie, than any other investigator—save Mr. Edison. One of his first exhibits of an incandescent lamp was made before the Chemical Society at Newcastle on December 16, 1878, and it con-

sisted of a slender rod or pencil of carbon suspended between platinum leading-in wires in an exhausted glass globe, but as was stated later by Lord Justice Fry: "The burner was not so slender that it could be described as a 'filament' and it burned but a short time, the carbon rod bending from the excessive current.'

A second lamp exhibited on February 3, 1879, lasted for some twenty minutes and in some lamps shown as late as October 20, 1880-some nine months after the publication of Edison's filament patent-Swan still utilized a short and thick low resistance carbon only suitable for series lighting and he states that he understands Mr. Edison's lamp to have a high resistance, much higher than he (Swan) believed safe in an incandescent burner. In a further statement made at this time, referring to the grouping of his lamps in series of ten to fifty or more, he stated: "There is no escape that I know of from this dilemma, viz: that if we must make our unit of light larger than necessary for a very great many purposes and so give us the idea of extensive division and extensive distribution in order to gain those points, we must group the lamps in the manner I have proposed" (i.e., in series).

Another English experimenter at this time (1878-1880), St. George Lane-Fox, seemed to have a more definite conception of the importance of using a filament of high resistance and small radiating surface, but while the specifications in his patent indicate a grasp of the theory, his platinum-iridium wire conductor in nitrogen gas, wires coated with finely divided asbestos fire clay and also his luminous bridge of combined conducting and non-conducting substances, were all of insufficiently high resistance for multiple arc

In 1881 Mr. Lane-Fox in discussing the problem, made the following important statement: "I think great credit is due Mr. Edison for having stated from the first that it was possible to introduce a system of electric light that could be so distributed and divided as to be available for household purposes. I think Mr. Edison was the first, and not Mr. Swan, to produce a practically useful lamp on the incandescent principle with a filament of carbon in a vacuum. Mr. Edison's researches, too, in respect to the presence of occluded gases in metal and other substances, are exceedingly interesting and very sound and scientific in the manner he has carried them out. I think he rendered very great service not only to the

future of electric lighting, but also to science by his investigations, and for this proper credit should be given him, more especially as in the future he will be able to show, and I have no doubt will show, that he was the first to succeed, and I think it is as well to recognize it at once. I say this entirely disinterestedly, because it is very much to my disadvantage that Mr. Edison should be first as I also have claims in this direction."

Contemporaneously with these developments and in the immediately succeeding years the following types of incandescent lamps appeared in Europe-Edison-Swan, Woodhouse and Rawson, Cruto, Gülcher, Crookes, Gatehouse, Siemens and Müller, and in this country Bernstein, Weston, Diehl and many others.

So much for the opinions of contemporary workers and what had been accomplished when Mr. Edison announced the birth of his

commercially successful lamp on October 21, 1879.

Again we must call attention to the fact that what Mr. Edison presented at the time in the terse language of Judge Lacombe was 'a burner of carbon, so small in cross-section that, by the ordinary usage of common speech, it may be fairly called a filament; the receiver which contains the burner is made entirely of glass; the conductors which connect with the burner pass through the glass; and from the receiver the air is exhausted."

It should be noted that in Mr. Edison's patent description he used the word "filament"—the first appearance of that useful term in the art. It is interesting to note that the "filament" of Mr. Edison was a structure more threadlike than any of his predecessorsa diameter of only 1/64"—whereas the prior art showed structures many times that size. So also the resistance of Mr. Edison's filament was many times the resistance common to the prior art.

These factors so clearly defined by the learned Judge-a carbon filament of high resistance in an all glass globe, conductors sealed into the glass, all enclosed in an exhausted glass globe made a combination which spelled success, a consummation "long desired, sometimes sought, and never before attained" and this combination in the opinion of the Court constituted a patentable invention.

An interesting story could be told of the search, covering every part of the globe, made to find the special type of bamboo of the most uniform grade and containing a minimum of silicious matter, in order to furnish material for the bamboo filament which for a number of years was such a prominent feature of the Edison lamp and contributed in no small measure to its early success. The extraordinary uniformity and exactitude with which filaments in great numbers and of a given size could be produced from the bamboo fibre, both before and after carbonization, made it practicable, by assignment of different voltages to individual Central Stations, to dispose of the entire factory product without recourse to the "flashing" process. The latter an early development in the art, was applied only in later years to the bamboo filament, and became of capital importance only with the advent of the so-called "squirted" cellulose filament.

The extent to which auxiliary apparatus developed or improved by Mr. Edison was contributory to the successful solution of the problem is illustrated by the notable improvements which he made in the apparatus for producing very high vacua, first improvements in the means of obtaining the Torricellian vacuum, then by modification of the Geissler and Sprengel mercury pumps, to which notable additions were applied, making it possible to obtain the highest vacua on the commercial scale that was necessary for exhausting incandescent lamp globes.

The Edison Central Station system was a practical working success at the very outset. Difficulties were encountered of course, unexpected, patience-trying contingencies and emergencies had to be met, but the system worked, it delivered satisfactory service and presently showed also the beginnings of a sound commercial and financial success.

The inquiry has often been made as to what single element out of all this splendid aggregation of units, called the Edison System, can be considered to have been primarily the factor to which its success is chiefly attributable.

The keystone of it all can be said to be in the very early recognition by Mr. Edison of the practical importance of the "multiple arc principle." This fundamental idea is so important and its engineering application so broad, that a word or two of definition seems essential to a proper comprehension of Mr. Edison's scheme. The earlier conceptions of electric lamps, as exemplified in all the existing arc light systems and also in the experimental demonstrations that had been made of incandescent and semi-incandescent lamps and their mode of circuit connection, almost without exception in-

volved the use of the "series" system, the lamps being connected one after another-in series, as we say-like beads on a string and, therefore, not independent of one another, but all dependent on the

integrity and continuity of the circuit or string.

At the very outset Mr. Edison proceeded on different lines-providing for absolute independence not only of the individual lamp but of each element of the system, from the boiler in the station to the interior wiring on the consumer's premises-whether the apparatus be mechanical, protecting it by stop valves, by-passes, or apparatus in duplicate, or electrical, by providing alternate paths and parallel supply circuits, all constructively connected like the rungs of a ladder. In other words, the system was not dependent on any single one of its elements, every feature was practically in duplicate, and means were provided so that any defective section could be instantly segregated and cut out, where practicable, automati-

This principle of operating everything in "multiple arc," an efficient method of duplicating everything, is the principal essential to regularity and continuity of electric service of the highest standard and this has always been a conspicuous outstanding feature of the Edison System where it has been properly installed and operated.

Such then was the Edison lamp and complete electric lighting system devised by him and worked out and developed along such permanently practical lines, forming the foundation of one of the most wonderful industrial developments the world has ever seen.

A few historical dates may have some interest at this time: In 1876 Edison established his laboratories and workshop at

Menlo Park, N. J.

Announcement of the invention of the carbon filament lamp was first made to the public in an article in the New York Herald, December 21, 1879, followed by an illustrated article endorsed by Mr. Edison, published in Scribners Monthly Magazine, February

The original Edison Lamp Factory at Menlo Park was started October 1, 1880. The first regular payroll of the Edison Lamp Company was dated November 11, 1880. The largest number of men employed in the Lamp Works at Menlo Park was 135.

80,000 lamps had been shipped from Menlo up to the time of removal and at that time some 50,000 lamps were in stock.

Moving of the Lamp Works to East Newark, now Harrison, was commenced April 1, 1882.

The Lamp Factory in East Newark actually started operations June 1, 1882, and 150 men were employed with a capacity of 1200 lamps per day.

At the Paris Exposition in 1881 there were presented for a competitive test the following lamps:

Edison, Swan, Maxim and Lane-Fox, the first named showing manifest economic superiority and commercial practicability.

Progress since then in the development of general types of incandescent lamps and their improved efficiencies may be epitomized as follows:

Following the carbon (bamboo) lamp, 1880-1881, an efficiency of 4-2/3 watts per candle power we have appearing in 1893 the carbon (squirted) filament at 3.1 w.p. c.p., the Nernst lamp coming from abroad in 1900 with a comparable efficiency of approximately 2 w.p. c.p., followed in rapid succession by the Osmium lamp in 1904 with an efficiency of 1.6 w.p. c.p., the metallized carbon (GEM) lamp in 1905 with 2.5 w.p. c.p., and the Tantalum lamp with 2 w.p. c.p.

c.p. .

Then succeeded a remarkable development in metal filament lamps, the Zirconium lamp, the Osmium lamp and finally in 1907 the Tungsten pressed filament and the Tungsten drawn wire lamps in 1911, all with efficiencies of from I to 1½ w.p. c.p., and to which should now be added the gas-filled Tungsten lamps with efficiencies in the larger sizes of about ¾ of a w.p. c.p.

This statement would be incomplete without some reference—only a mere mention being possible—of the earnest work of the successors to Geissler in tube lighting, including Cooper-Hewitt with his mercury vapor lamp, Tesla with his high frequency vacuum tube, the "Neon" lamp, and the pioneer work of D. MacFarlane Moore in vacuum tube lighting.

A reliable authority has estimated that one hundred years ago the average American family spent about \$22 per year to light the household, using sperm oil and tallow candles and obtaining about 9,000 candle hours of illumination.

Fifty years later substituting kerosene for candles the average family continued to spend about \$22 per year but obtained about 13,500 candle hours.

By 1885, passing from the early days of improved kerosene lamps and the advent of illuminating gas, kerosene had been reduced to 22 cents a gallon and gas to \$2.00 per 1000 cu. ft., and the average family spent about \$30 a year, obtaining for it about 76,000 candle hours

During the succeeding years we find lowered prices of gas, the introduction of the Welsbach burner and the introduction of electric lighting, and today the average family still spends about \$24 a year for light and with gas at \$1.00 per 1000 cu. ft., it obtains about 300,000 candle hours of illumination, and with electricity at, say, 10 cents a kilowatt hour about 200,000 candle hours.

Therefore, while the average American family is now spending about the same sum annually for illumination as a century ago, it obtains more than twenty times the amount of light!

CONCLUSION

SUCH has been the progress in the art of Incandescent Electric Lighting of which many in this gathering have witnessed the birth and evolution of its greatest developments, all effected in the brief span of less than forty years.

Who would be so rash then as to prophesy what further progress the future may still have in store for us. It is, however, perfectly safe to predict that in the very near future every family, every household, however humble, will find it possible to obtain as much light as it needs at an expense that will be the smallest item in the household budget, contributing notably to our happiness and the enjoyment of life, so that all may feel they have a share in the good things provided by the industrial application of the scientific discoveries of the master minds of the human race.

PRESIDENT JOHN W. LIEB VICE PRESIDENTS S. Z. MITCHELL T. COMMERFORD MARTIN HISTORIAN

WILLIAM H. MEADOWCROFT

EDISON PIONEERS

1870-1885

TREASURER FRED'K A. SCHEFFLER 50 CHURCH STREET SECRETARY ROBERT T. LOZIER 32 W. 40TH STREET NEW YORK

Orange. N. J. March 31, 1919.

Mr. Chas. L. Clarke, Cons. Engr., General Electric Company. Schenectady. N.Y.

My dear Mr. Clarke:

At the recent Luncheon of the Edison Pioneers on February 10th, there was some discussion on the subject of each Member providing the Historian with autobiographical data. I suggested the idea that each Edison Pioneer write an autobiographical sketch of his own life, especially with reference to his connection with Mr. Edison or his Interests, showing the beginning of his connection therewith and the story of his activities during his association with Mr. Edison or his companies.

Such an autobiographical sketch might well include any matters of interest that might have occured prior to, or since the termination of, the Pioneer's connection with Mr. Edison or his Interests.

The idea put forth at the Luncheon was to get all this autobiographical data together and have it put in book form, so that each Pioneer could have a copy of the whole thing. It is desirable to have each autobiography as full as possible but not to exceed 1500 words.

It is particularly desirable to have your photograph either when "In Active Service", or later. In order to have the photographs uniform, they should be as nearly as possible the same size as Mr. Edison's photograph in the Edison Pioneers booklet of Constitution and By-Laws which you recently received. Please autograph your photograph before sending.

If we all get on the job right away, perhaps we can complete it during the present year. Please address your manuscript and photographs to W. H. Meadowcroft, Edison Laboratory, Orange, N. J.

Yours sincerely, was leadowcoff
Historian.

P.S. Please fill out the blanks on the enclosed sheet and return same with your autobiographical sketch.

Consulting Enqueering Dept. General Electric Co., Selieuxetady, N.Y. Sept. 24/1919.

Mr. Wm, H. Meadowerest; Historian, Edison Proneers, Edison Laboratory, Orange, N.J.

My dear M. Meadowcroft:

atlast, I am souding you herewrite a brief autobiography of all, as material for you to work whom me getting up a part of liestory of the numbers of the Edison Plomeers.

also my photograph, with attached autograph, which was taken on my fifteette birtheday, april 16, 1903 - a time in life when one ordinarily is supposed to be in the prime of life. Of course, I look of der sow, and have assumed that you prefer pictures, Which show us possessed & the maximum suap, combined with well-rounded experience and sound judgement.

Hoping I have furnished the desired

material for your purpose, I remain,

material for your purpose, I remain,

provided provided to Market Cardises, yours,

per particular provided to Market Chas. Lelands

LABORATORY OF THOMAS A. EDISON ORANGE, N. J.



Mr. Chas. L. Clarke,

Consulting Engrg Department Thas Brooks, General Eleo. Company, Mest Stony Creek, Schenectady, N

Schenectady, N.Y.

Calle Address "Edison New York" From the Laboratory Thomas A. Edison, Orange, N.J. September 26, 1919 Mr. Charles L. Clarke. Consulting Engineering Dept. General Electric Co., Schenectady, N. Y. My dear Mr. Clarke: I have received this morning your letter of September 24. also your autobiography and photograph. I consider the latter as a very good one and I am glad that you have chosen one at that age, which, as you say, represents a person in their real prime. I note that you and I are of the same age, that is to say, I lack one month of you, but we were born in the same year, except that I was born in May and you in April. I have read your autobiographical sketch with a great deal of interest. It shows a well balanced, rounded out life, which you may be well proud of, without conceit. If I may take the liberty of offering my congratulations upon your sketch from a literary standpoint, I want to do so. The autobiographical sketch is a model. With kindest regards and all good wishes, I remain, Sincerely yours, Wyf Meadower of & Ediphoned M:26

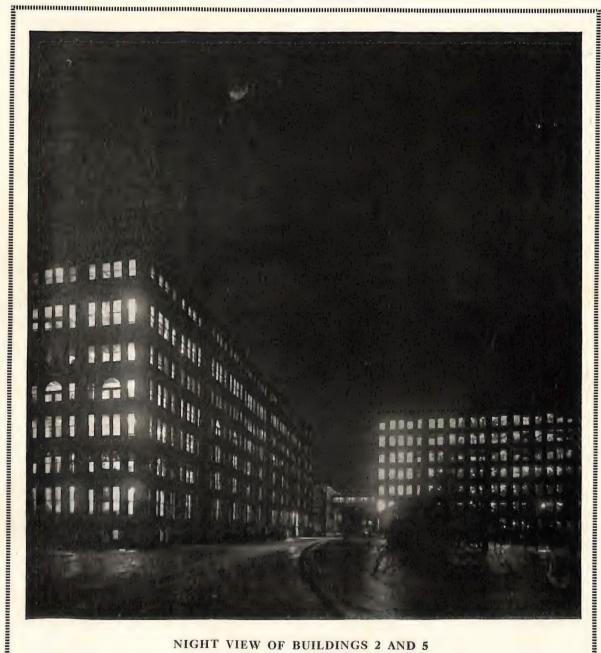


Page 18

VOL. 3

OCTOBER 10, 1919

No. 17



NIGHT VIEW OF BUILDINGS 2 AND 5

"GENIUS IS 2 PER CENT INSPIRATION AND 98 PER CENT PERSPIRATION"

-Thomas A. Edison.

—Thomas A. Edison.

In these simple words Thomas A. Edison tells the secret of his many wonderful successes in the inventive field. In his monor we celebrate a day each year, October 21, to commemorate the results of his magnificent research work which led to the discovery of the incandescent electric light forty years ago on October 21, 1879.

Detroit and Port Huron. He set up a laboratory in a corner of the car and between paperselling times went on with his experiments. Edison became interested in telegraphy while selling papers on the train. He finally became a telegrapher and from the time he was sixteen until he was twenty-one he traveled about the country. He read incessantly and continued his experiments. "I've got so much to do and life is so short, I'm going to hustle," he said to his friend Adams, and these words are characteristic of the man



Geo. Dean. Thos. A. Edison. Chas. T. Hughes. Geo. Hill Geod. Geo. Carman, Franchs Esh. "Basie" Lawson. Chas. Flammer. C. P. Mott. A. Mckenzie

A brief digest of his life, which is so full of accomplishment as to defy the chroniclers to do justice to it, is given to show that by perseverance and hard work a man's goal is gractically unlimited.

The story of his youth is typical of the real American boy and right down to the present day contains a real human note that is rarely found in men of such high attainments. He is a real person—a real friend of every American boy—and is just as jolly and full of fun as he was when he was a boy. School had no attraction for him, but he had a natural curiosity to know "why" regarding everything mechanical, and a capacity for work that finally landed him in the envisable position of America's most famous man.

At fourteen he was editing and selling newspapers on the Grand Trunk Railroad between

man would be insignificant or wasted in such gigantic labor,—but through the efforts of the Research Laboratory of the General Electric Company at Schenectady, the incandescent lamp has been brought up to its present high state of development.

Mr. Edison was largely responsible for establishing the present location of the General Electric Company in Schenectady. He was desirous of locating his plant and laboratories outside of New York City. One of his assistants happened to notice two empty buildings while riding through this city on a New York Central Railroad train and reported



Thos. A. Edison and Some of the Men Who Helped to Establish the Schenectady Works of the General Electric Company. Photographs taken about 1886.

the fact to Mr. Edison, who investigated and found them to be the abandoned machine shops of a locomotive works. He secured this site and moved the Edison Machine Works from Goeriek Street, New York City, and it was from this nucleus that our present wonderful plant sprang. The original buildings are still part of the plant and are now known as Shops to and part of 12.

Mr. Edison is credited with nearly one thousand four hundred inventions and occupies the pinnacle in world's fame in the field of endeavor relating to electrical science. The official American text book of America's great men, "Who's Who in America," sums up

Photographs taken about 1886.

peater, quadruplex telegraph, printing telegraph, etc. Established workshop at Newark, N. J., removing to Menlo Park, N. J., 1876, and later (1887) to West Orange, N. J. Invented machines for quadruplex and sextuplex telegraphic transmission; the carbon telephone transmitter; the microtasimeter for detection of small changes in temperature; the megaphone, to magnify sound; the phonograph; the incandescent lamp and light system; the kinetoscope, kinetograph, kinetophone, telescribe, alkaline storage battery; since commencement of European War, 1914, designed, built and operated successfully several benzol plants; also two carbolic acid

plants; also other chemical plants for making myrbane aniline oil, aniline salt, and paraphenylenediamine; has received patents for more than 900 inventions. Was made Cheyalier, Officer, and afterwards Comdr. Legion of Honor, by French Govt; apptd. 1993, hon. Chief consulting engr., St. Louis Expn., 1904. Awarded John Fritz medal, 1908; Rathenau medal (German), Am. Mus. of Safety, 1914. Pres. Naval Consulting Bd. since July, 1915. "Home: Llewell ynPark, Orange, N. J."

COLUMBUS DAY, OCTOBER 12

COLUMBUS DAY, OCTOBER 12

OLUMBUS Day was first observed as a holiday in the United States about seven years ago—over four hundred twenty years after Christopher Columbus, the first white man to set foot on American soil, discovered America. In all parts of our country exercises to commemorate the date are held, and particularly among the Italian people is this day observed as an occasion of celebration

and festivity.

In the vigor of manhood Columbus was of an engaging presence, tall, well formed, and muscular, and of an elevated and dignified demeanor. His visage was long, his nose aquiline, his eyes light gray, and apt to enkindle. His whole countenance had an air of authority. Care and trouble had turned his hair white at thirry years of age. He was moderate and simple in diet and apparel, eloquent in discourse, engaging and affable with strangers, and of great amiability and suavity in domestic life. His temper was naturally irritable, but he subdued it by the benevolence and generosity of his heart. Throughout his life he was noted for a strict attention to the offices of religion; nor did his piety consist in mere forms, but partook of that lofty and solemn enthusiasm with which his whole character was strongly tinctured. Of a great and inventive genius, a lofty and noble ambition, his conduct was characterized by the grandeur of his views and the magnanimity of his spirit. Only by memoirs was the task he set out to accomplish and the trials and disappointments he underwent.

Little or nothing was known of the great unchartered ocean by which he hoped to reach India, and belief was prevalent that all sorts of hidden danger and disasser awaited those who defied the mystical tales of monsters and other evils with which the ocean was supposed to be inhabited. In the vigor of manhood Columbus was of

Courage and determination were the characteristics that finally overcame the innumerable barriers placed in the way of his proposal. Each time he was rebuffed he always tried again, until finally his efforts were crowned with success. His qualities as a leader are exemplified in the story of his first journey, and we here publish a brief outline of his early life, leading up to the discovery of America.

exempined in the story of his first journey, and we here publish a brief outline of his early life, leading up to the discovery of America.

Christopher Columbus, Italian navigator, the discoverer of America, was born in Genoa probably in 1446. His father, Domenico Colombo, a poor wool-comber, gave him a careful education. He soon evinced a strong passion for geographical knowledge, and an irresistible inclination for the sea. The details of his early life are confused and unsatisfactory. He appears to have gone to sea at an early age, and to have navigated all parts of the Mediterranean and some of the coasts beyond the Strait of Gibraltar. In 1470 we find him at Lisbon, where he married the daughter of Bartolommeo de Palestrello, a distinguished navigator, who had founded a colony in Porto Santo, an island recently discovered and belonging to the Madeira group, and had left many charts and nautical instruments. Columbus made use of these materials, and his opinion that the other side of the globe contained land, belonging to eastern Asia and connected with India, which was, as yet, little known, became more and more fixed. While the Portuguese were seeking to reach India by a southeast course around Africa, he was convinced that there must be a shorter way by the west. He applied in vain to Genoa for assistance, and equally fruitless were his endeavors to interest John II. of Portugali in the enterprise. He also sent letters on the subject to Henry VII. of England, with the same ill success. He then determined to Apply to the Spanish court, Ferdinand and Isabella being at this time the sovereigns of Spain, and after an eight years' struggle with the obstacles thrown in his way by ignorance and malice, he received three small vessels. These were named the Pinta, the Nina, and the Santa Maria; and according to Jal each of them was fully decked and had four maars and a crew of 90 men. The dignity of high-admiral and viceroy of all the overeigns of them was fully decked and had four masts and a crew of 90 men. Th

the port of Palos. Eighteen years had clapsed since he had first conceived the idea of this enterprise. The most of that time had been passed in almost hopeless solicitation, amidst poverty, neglect, and ridicule; the prime of his life wasted in the struggle. Nor should it be forgotten that it was to Isabella alone that he was finally indebted for the means of executing his project, which had been coldly rejected by the prudent Ferdinand. Having provided himself at the Canary Islands with fresh water, he sailed southwest into an ocean never before navigated. But when twenty-one days had clapsed without the sight of any land, the courage of his men began to sink. It was certain, they said, that they should perish, and their visionary commander ought to be forced to return. Some of them even proposed to throw him overboard; and Columbus had to exert all the powers of his daring and commanding spirit to prevent an open rebellion. A phenomenon, which surprised even him, filled his pilots with consternation; the needle deviated a whole degree. But the sea appeared suddenly covered with grass, and again showed symptoms of shoals and rocks. Numbers of birds were also seen. Columbus sailed in the direction from which they flew. For some days the voyage was continued with revived courage, until at least the disastisfaction of the crews began to break out into open violence; but Columbus, after endeavoring invain to pacify his men by promises, finally assumed a different tone, and told them it was useless to murmur; that he was determined to persevere. Fully convinced that he must be near the land, he promised a reward to whosoever should first discover it. On the night of October 11 and 12 Columbus himself described a light which sometimes flickered in the distance and sometimes disappeared, and at 2 o'clock on the morning of the 12th a cannon shot from the Pinta announced that a sailor belonging to that vessel had discovered land.

On landing Columbus threw himself upon his knees and kissed the earth, returning the col

had discovered land.

On landing Columbus threw himself upon his knees and kissed the earth, returning thanks to God. The natives collected around him in silent astonishment, and his men, ashamed of their disobedience and distrust, threw themselves at his feet, begging his forgiveness. Columbus drawing his sword, planted the royal standard, and in the name of his sovereigns took possession of the country, which, in memory of his preservation, he called Saint Salvador. He then received the homage of his followers, as admiral and

viceroy, and representative of the sovereigns.
Columbus died at Valladolid, Spain, May 20 or 21, 1506. His remains were transported, according to his will, to the city of St. Domingo, but on the cession of Hispaniola to the French, they were removed in January, 1706, with great pomp, to the Cathedral of Havana in Cuba. A splendid monument was erected to him, in a convent at Seville, where his body lay before being transferred to St. Domingo. In 1898 his remains were again removed to Spain, Cuba being no longer a Spanish possession since the war with the United States.

SOCIAL ACTIVITIES IN SECTION A

ME non concerts in this department are very much enjoyed by the employees in this section. The success is due in part to the excellence of the orchestra. The musical ability evinced by Section A is equal to that in any other section of the Works. The girls in this section have that gettogether spirit which is so characteristic of the present time. Social gatherings at the homes of the girls make it possible for them to become acquainted with each other, and to have many good times as well.

On September 12, a farewell reception was held in honor of Miss Margaret Grace, who is leaving Schenectady. The reception was held at the Machinist Hall. Dancing was the main feature of the entertainment.

LOST AND FOUND INDUSTRIAL SERVICE DEPARTMENT, BUILDING 1

Lost—Fountain pen, somewhere in Section
"I." Valued greatly by owner as a keepsake.
Finder please return to A. Allen, Induction
Motor Department, Building 40.
FOUND—Key for Yale lock.

FOUND-On Dock Street, ring with eight

FOUND—On Works Avenue, one key. FOUND—Near Subway gate, one pair gold w glasses in case.

bow glasses in case.

Lost—Swan fountain pen. Reward. G. C.
Hyde, Building 6.

Lost—Gentleman's fourteen-carat signet ring—Initials "W. P. S." engraved inside of ring. Finder please notify W. P. Sommer, Check No. 11712, Building 69. Reward.

FOUND-In Building 17, ring with two keys.

19. Union - Star. Oct. 21. 1919.

ANNIVERSARY

This is Edison Day, observed throughout the electrical industry as the fortieth anniversary of the invention of the electric lamp by Thomas Alva Edison.

The occasion was very fittingly celebrated at the General Electric Works this noon. It will be remembered by many old-time Schenectadians that one of the first electric plants of the then young inventor was established in this city in the carly eightles on the site of what is now the General Electric works. Such was the humble beginning of the great electrical industry.

Ed son Day at the G. E. plant today consisted of a large parade down Works Avenue, headed by the General Electric band, and appropriate ceremonies in building No. 76. The feature of the whole event was a delightful address by an old associate of Edison's, Charles & Clarke of this city, an employe of the General Electric Company. Mr. Clarke worked with Edison in the old days and told many interesting anecdotes of the great inventor and his struggles with the new lamp, which everyone said was impossible. The speaker racited the interesting history of the lamp and its final discovery and told of his pleasant services with Edison in the carry days of the electrical industry.

The program was in charge of H. R. Sargent. Shortly after 12 o'clock the ceremonies opened with "Americal Industry.

The program was in charge of H. R. Sargent. Shortly after 12 o'clock the ceremonies opened with "Americal Industry.

The program was in charge of H. R. Sargent. Shortly after 12 o'clock the ceremonies opened with "Americal Industry.

The program was in charge of H. R. Sargent. Shortly after 12 o'clock the ceremonies opened with "Americal Industry.

The program was in charge of H. R. Sargent. Shortly after 12 o'clock the ceremonies opened with "The Star Spangled Banner" in chorus.

The Krickerbooker Press

GENERAL ELECTRIC

Oct. 22, 1919. Parade of Employes Exercises Feature Observance.

Forty years ago, October 12, Thomas A. Edison gave to the world the incandescent lamp. As a fitting tribute to the man who started the electrical industry, that date is known as Edison

industry, that date is known as Edison day.

At the General Electric company, Schenectady, Edison day was celebrated, with a parade down the Works avenue headed by the General Electric band, and in Building 76, ceremonies took place, H. R. Sargent, chairman of the committee, prepared the following program: "America", chorus; selections by the Edison quartet; contraits solo, Miss Rose Mountain, with Miss Midred Holmes, accompanist: "Reminiscences of the Early Days with Edison," by Charles L. Claria, "The Starspangled," chorus.

The reminiscences of Mr. Clarke, who was so long associated with Mr. Edison in the beginning of the electrical industry, are of interest to the people of Schenectady, many of whom can remember when one of Edison's largest plants was located in the city, forming the nucleus of the present works,

was questioned from some quarters roved in econtown and of commercial walue. He once said in substance in an and of commercial walue. He once said in substance in a contain the later of the said their rough the later rou ower as to take

Celebration Held to Commemorate Invention of Incandescent

Lamp By Edison.

Cetable 122, 1919.

CHARLES L. CLARKEGIVES

REMINISCENCES OF INVENTOR, not the only in-a have done you make to the world's to get any regiven to it im-Vhy, man, I have large in the sum of the world's to get any regiven to it im-Vhy, man, I have large in the sum of the world and lastly the the sum of the sum of the world and lastly the the tungsten of transmitter by

e transmitter by

known, in 1878, lamps per day, one can bawl Edison Light company and is now a consulting engineer of the General Electric company and is now a consulting engineer of the General Electric company and is now a consulting engineer of the General Electric company.

Mr. Clarke's address follows:

| Rnown, in 1818, lamps per day, an inventor of redicted that in the consulting engineer of the General Electric company and is now a consulting engineer of the General Electric company.

Mr. Clarke's address follows:

lled with inert

bower as to take
inary gas burnert succeed right
mes and similarrary, he devised,
retty poor lamps,
epresented in the great deal about
legren was made ld not be done.

f speech was at, Rewarded.

magneto-electric at least 98 per 3 uses tobacco

Ridicule.

Inventor, Not Scientist.

"He has never claimed to be a scientist, and prefers to be known as an inventor, seeking to devise things

ensive piece of apparatus, ry for a certain investiremarked that no man real inventor unless he verything with a jack ean pot.

sty of Character.

man of tremendously perament combined with character, like most men geously attempt new take the lead, he has geously failed to succeed and been lost, but he has ehind his strictly legal oid payment of what he is justly moral debts. As in to the point: An en-ch was promoted on cer-

derately Rich.

justly a moderately rich comparison with the he has added to this he has been one of aid men in money.

ionable whether any of numerated according to our work on the same on has been paid, would money to buy one r a pair of cotton socks iter reward than money is his-the gratitude, d respect of everyone creditors, for which a emory of him and his 70 through centuries to

ally all electrical indusof every groaning ma m of every wheel, the courage of his hammer, the rasp of one can bawl ar of the furnace flame, ced that he is neasure but the ampli-er ready to be ! the work that went eason by the in Edison's laboratory not take kind- elling energy, directed

And let us not forget that we, not Edison, are reaping the major return from his labor. "Let us hope that Edison may be

with us, possessed of unabated mentality and sound physical vigor of which there is certainly every reasonable promise today, to join in celebrating the 50th anniversary of he birth of the incandescent electric

EDISON DAY AT GENERAL ELECTRIC Schenectady Gazette

and Selections By General

Electric Band.

Solo—(Contralto) Selected sed an electric sed an elect

Clarke who was so long associated
with Edison in the very beginning also made to

with Edison in the very beginning to also made to ement and comof the electrical industry are of the cal arc lamp of greatest interest to Schenectadians, power suitable to February 1, 1880, in Edison's labora-tory at Menlo Park, N. J. He was later chief engineer of the original

tric company.
Mr. Clarke's address follows:

LABORATORY OF THOMAS A. EDISON ORANGE, 'N. J.





Mr. Charles L. Clarke,
109 Glenwood Boulevard,
Schenectady, N.Y.

LABORATORY OF THOMAS A. EDISON ORANGE, N. J.





Mr. Charles L. Clarke,
109 Glenwood Boulevard,
Schenectady, N.Y.

Cable Address "Edison New York"

10/26/19

From the Laboratory Thomas A. Edison,

Orange, N.J. October 27, 1919.

Mr. Charles L. Clarke, Engineering Dept., General Electric Co., Schenectady, New York.

My dear Mr. Clarke:

I received the copy of the Schenectady Gazette which you so kindly sent me, and enjoyed very much the reading of the account of the celebration of Edison Day at the General Electric Works.

I appreciated especially the address which you made, giving some reminiscences of the old days. To me, this was like going back home after many years absence.

I passed the newspaper on to Mr. Edison, who read the article with a great deal of interest, and he personally wants to add his thanks to mine.

With kindest regards, I remain,

Sincerely yours,

1 Hilleavower of



NOVEMBER 14, 1919



THE WORKS AVENUE AS IT APPEARS TODAY Read "The Story Back of the Picture"

WIRING SUPPLIES DEPARTMENT BUILDING 77, COMMEMORATE EDISON DAY

N Tuesday, October 21, at noon, the Wiring Supplies Department, Building 27, celebrated the fortieth anniversary of Edison Day with appropriate ceremonies. October 21 each year is observed throughout the nation as Edison Day, to commemorate the birth of the incandescent lamp which came into being on October 21, 1879, in the laboratory of Thomas A. Edison, at Menlo Park, N. J. Provade led by the G.F. Band

Park, N. J.

A street parade, led by the G-E Band, started at the main gate and swept down the Avenue to Building 76, where the exercises were held. A carefully prepared program, in charge of Chairman H. R. Sargent, was then rendered as follows:

Chorus
Selections.

Edition Quartette
F. X. Breymaier, Clarence Whitmyer, John Grey and Walter Melber
Solo (Contralto) Selected.

Miss Mildred Holmes, accompanist

Reminissences.

Miss Mildred Holmes, accompanist

"Room 202," by the Edison Quartette, took the crowd by storm and several encores were called for. "Dear Old Pal of Mine" and "Boy of Mine," by Miss Mountain, were enthusiastically received by the large audience and all agreed that this was one of the best programs ever offered in the Works.

The feature of the meeting was a speech by Charles L. Clark, who was associated with Mr. Edison in the very beginning of the electrical industry. Mr. Clarks joined Mr. Edison in the very beginning of the electrical industry. Mr. Clarks joined Mr. Edison February 1, 1880, and was continuously associated with him until the time of merging with the General Electric Company. Mr. Clarkis still active in the organization and is now the proud possessor of the title of the second oldest man in point of service with the Company.

Mr. Clarkis description of the man Edison was vivid, humorous and enlightening. The terrific struggle and opposition which he had to overcome in perfecting the incandescent lamp, as well as the history of lamp development, was most interestingly told.

After Mr. Clarks speech the band played the National Anthem, which was sung by the entire gathering.

Back of the raised platform a picture of Mr. Edison was hung, draped with the American flag. Above the picture various types and sizes of Mazda lamps were dis-

played, and the effect was pleasing and

played, and the effect was pleasing and appropriate.

The committee in charge of this affair was: John J. McCann, chairman; Louis Conenzo, Frank Dunn, J. Tanski, W. L. Cooper, Frank Callapy and William Leonard.

The meeting was held in Building 76 by courtesy of Mr. Grande.

INTERNATIONAL G-E NOTES

INTERNATIONAL G-E NOTES

THE Quotation Division of the International General Electric Company held a clam steam and outing, recently, at the summer residence of W. E. Proper, at Ballston Lake, and a royal good time was enjoyed by all who attended.

On October 18, a farewell dinner was given Harold E. Johnson, who has been connected with the Foreign Department for several years and has accepted a position with the General Electric Company of Cuba, at their principal office in Havana, and expects to leave for Cuba about November 15, to take up his new duties.

During the winter months gatherings of a similar character are being planned by the Quotation Division, with the idea of more firmly cementing the friendly feeling that now exists in this section of the International General Electric Company.

FOREWARNED IS FOREARMED

RECENTLY one of our local newspapers published an article under the following headline:

LIBERTY BONDS BURNED Money Lost When Fire Destroys House on Troy Road

Now, we don't want to croak and tell you "I told you so," but this is just the thing we have continually warned you against through the columns of the SCHENECTADY WORKS NEWS.

Put your bonds in a safe place and do it now. The Company will gladly take care of them for you. It costs you nothing and in addition, you get additional service free. Your coupons will be clipped when they become due and a check for the amount sent to you.

Why take unnecessary chances? Protect yourself by playing the game safely.—Liberty Bond office, second floor, Building 2.

ROOSEVELT MEMORIAL DAY

ROOSEVELT MEMORIAL DAY

CTOBER 24 was designated as Roosevelt Memorial Observance Day in the Schenectady Works, and a circular was issued suggesting that programs be arranged for the noon hour of that day to commemorate the heroic leadership of the late Colonel Theodore Roosevelt.

The response was practically unanimous and no more fitting tribute could possibly be offered than the enthusiasm and reverence displayed on all sides in paying homage to the work of a great man.

He was timid; he made himself a lion of courage. He was a dreamer; he became one of the great doers of all time. Men put their trust in him; women found a champion in him; kings stood in awe of him, but children made him their playmate. He broke a nation's slumber with his cry, and it rose up. He touched the eyes of blind men with a flame that gave them vision. Souls became swords through him; swords became servants of God. He was loyal to his country and he exacted loyalty; he loved many lands, but he loved his own land best. He was terrible



The volume of eulogy expressed was far too great for us to chronicle here; however, we cannot pass on without a word in behalf of one of our greatest Americans.

The dedication issued by the Roosevelt Memorial Association is so expressive as to dwarf any attempt on our part to do the subject justice, so we herewith reprint it without unnecessary adornment:

DEDICATION

"He was found faithful over a few things and he was made ruler over many; he cut his own trail clean and straight and millions followed him toward the light. He was frail; he made himself a tower of strength.

in battle, but tender to the weak; joyous and tireless, being free from self-pity; clean with a cleanness that cleansed the air like a gale. His courtesy knew no wealth, no class; his friendship, no creed or color or race. His courage stood every onslaught of savage beast and ruthless man, of loneliness, of victory, of defeat. His mind was eaget, his heart was true, his body and spirit defiant of obstacles, ready to meet what might come. He fought nijustice and tryranny; bore sorrow gallandy; loved all nature, bleak spaces and hardy companions, hazardous adventure and the zest of battle. Wherever he went he carried his own pack; and in the uttermost parts of the earth he kept his conscience for his guide."

EDISON DAY AT GENERAL ELECTRIC

Celebration Held to Commemorate Invention of Incandescent Lamp By Edison.

CHARLES L. CLARKEGIVES REMINISCENCES OF INVENTOR

Program Marked With Singing and Selections By General Electric Band.

Forty years ago, October 21, Thomas Alva Edison gave to the world the incandescent lamp. And as a fitting tribute to the inventive genius of the man who thus turned night into day and started the great electrical industry on its way, this date is now known as "Edison Day" the length and breadth of the land.

Edison Day was fittingly celebrated at the General Electric works yesterday with a street parade down Works avenue, headed by the General Electric band, and appropriate ceremonics in building 76.

The program, in charge of Chairman H. R. Sargent, follows:

America Selections Edison Quartet F; X. Breymaier, Clarence Whitmyer, John Gray and Walter Melber.

Miss Mildred Holmes, Accompanist.

The reminiscences of Charles L. Clarke who was so long associated with Edison in the very beginning of the electrical industry are of the greatest interest to Schenectadians, many of whom can remember when one of Edison's largest plants was located in this city, forming the nucleus of the General Electric company. Mr. Clarke went with Edison February 1, 1880, in Edison's laboratory at Menlo Park, N. J. He was later chief engineer of the original Edison Light company and is now a consulting ungineer of the General Electric company and is now a consulting engineer of the General Electric company

Mr. Clarke's address follows:

Mr. Clarke's Address.

"We are here to commemorate the Invention, 40 years ago today, at Menlo Park, New Jersey, of the first practical electric lamp of such moderate illuminating power as to take the place of the ordinary gas burner for lighting our homes and similar

"That invention, represented in the incandescent electric lamp, was made by Thomas Alva Edison, whose name grateful world holds in high honor for his thus giving to it one of the greatest boons for its comfort and other civilizing influences ever con-ferred by the brain and hands of

telegraphy, the quadruplex telegraph, a variety, but is careful in its selecthe carbon telephone transmitter by tion, practically resisting meat as which the range of speech was at bad for the health and has always once immensely increased, the phono- absolutely cut out alcoholic drinkgraph, the fundamental inventions absolutely necessary to a large and much sleep.' universal electric light and power system, his storage battery and motion picture apparatus, and many other inventions represented by considerably more than 1,000 patents in the United States alone, nevertheless, other fellow, but does not take kindit is appropriate on this occasion, ly to the bawling process.

that attention be confined substantially to his lamp and matters most closely related thereto,

Beginning of Incandescent Lamp.

"Sir Humphrey Davy produced the electric arc early in the last cenfor years commercially unutilized because of the prohibitive cost of current from a chemical battery, which was the only known available source of electricity for this purpose.

"Faraday, in 1831, led to its use by the discovery of magneto-electric induction and devised an electric machine, which was the forerunner of the electric generators of today. But it was not until after 1870 that the electric arc lamp and the generator were sufficiently developed to be in commercial use for arc lighting on a scale worthy of much con-

"Many efforts were also made to produce an economical are lamp of small illuminating power suitable for home use, until it was finally and correctly pronounced impossible. Effort was also made to produce in-candescent lamps, all of which were complete failures.

A Target of Ridicule.

"When it became known, in 1878, that Edison, already an inventor of fame, had undertaken to solve the problem, the so-called "sub-division Reminiscences C. L. Clarke of the electric light," he at once be-Star Spangled Banner Chorus came the target of ridicule from Accompanied by General Electric many scientists, his business honesty was questioned from some quarters was questioned from some quarters in the press, on the ground that it was a stock-jobbing scheme, and jealous gas journals added their hilarious share to the fun and derision poked at him from many quar-

"Well, he didn't succeed right away; on the contrary, he devised, human-like, some pretty poor lamps, but was learning a great deal about how the thing could not be done, thereby concentrating) his efforts nearer to the objective point. The situation for a time was similar to that relating to another undertaking in which Edison was concerned, which lead a friend to inquire. "Isn't it a shame that with the tremendous amount of work you have done you haven't been able to get any results?" "Results! Why, man, I have gotten a lot of results, I know several thousand things that won't work."

Edison's Efforts Rewarded.

"And all the time the scrap heap graw-nobody can pile one up faster or easier than Edison. At last his efforts were rewarded. On Tuesday, October 21, 1879, he had the audacity to carbonize a slender cotton thread and try it as an incandescent burner in an exhausted globe. The seemingly frail thing endured far beyond all expectation, besides it had the small surface necessary for a small light, and the long, siender, filamentary begans of the state of the small light, and the long, siender, filamentary begans of the same tark to the same tark to be seen that the same tark to be seen to be seen to be seen the same tark to be seen to be "Although this is not the only in- tary body of high resisting carbon

provements in printing and duplex generous diet in the sense of having also, by the way, what he calls 'too

"He always has the courage of his convictions, and no one can bawl him out if he is convinced that he is in the right. He is ever ready to be convinced for good reason by the

Inventor, Not Scientist.

"He has never claimed to be a scientist, and prefers to be known as an inventor, seeking to devise things useful to man and of commercial value. He once said in substance that he could not spend his life in the scientific investigation of the fuzz on a bee but must be producing something of utility.

"And on another occasion, when an assistant insisted that an unusually expensive piece of apparatus, was necessary for a certain investigation, he remarked that no man could be a real inventor unless he could do everything with a jack knife and bean pot.

Honesty of Character.

"He is a man of tremendously hopeful temperament combined with honesty of character, like most men who courageously attempt new things and take the lead, he has sometimes failed to succeed and money has been lost, but he has never hid behind his strictly legal rights to avoid payment of what he considered his justly moral debts. As an illustration to the point: An enterprise, which was promoted on certain of his inventions, failed because of the discovery of iron ores with which he could not compete, and the company stopped business with a loss of some millions of dollars put in and several hundred thousand dollars of Edison paid off that debt personally, saying that no company in which he was actively concerned had ever failed to pay its debts, and this one must be no exception. failure entailed on him, at 50 years of age, a staggering personal loss, and yet, when things looked bluest, he brightly exclaimed: 'Well, it's all gone, but we had a hell of a good time spending it,' and then cheerfully went to work to pay off that debt.

Moderately Rich.

"Edison is justly a moderately rich man but in comparison with the wealth' which he has added to this world's goods, he has been one of the poorest paid men in money.

"It is questionable whether any of us here, if renumerated according to the value of our work on the same scale as Edison has been paid, would have enough money to buy one square meal or a pair of cotton socks

"But a greater reward than money can measure is his—the gratitude, the honor and respect of everyone. He will go out of the world one of its greatest creditors, for which a respecting memory of him and his work, will live through centuries to

"In practically all electrical industry, the sound of every groaning machine, the hum of every wheel, the ring of every hammer, the rasp of the file, the roar of the furnace flame are in large measure but the ampli-fied achoes of the work that wen TO THE THE PROPERTY OF THE PRO THE WALLACE CO.

Dining Furnit



UR assortment p individual piece is up to the Wallac ship there are none of t Every one who adn

Dining Ro

They possess all th furniture-the workman

at

8 Piece Chippendale Su mahogany

8-Piece Queen Anne Su at

the birth of the incandescent electric celebrating the 50th anniversary of sonable promise today, to join in tality and sound physical vigor of which there is certainly every rea-Senius, and not altogether liking with us, possessed of unabated men-

the major return from his labor: "Let us hope that Edison may be state, The lamp long sought, and in by this genius. And let us not for-general considered impossible, was get that we, not Edison, are resping finally invented,

man's goods.

"Ho belleves in abstemious, but

made specially for him to surprise busy on a problem, as proved by his smoking up a box full of that kind and hair without inconvenience, when theless, smoke clgars filled with rags way the better, believing it affects the nerverboth ways, and rather likes the other rogether common, He uses tobacco but with some characteristics not alshout like the rest of us in general, "Edison is a very human man, just Edison a Smoker.

duced yearly in this country. to the largest Mazda C are now prosizes from the little ministure lamp incandescent lamps of all kinds and

grand total of about 240 millions of bon flament lamps were made. 20 millions of squirted and Gem carare of the Mazda C type, and in 1918, watts, of which nearly 13 per cent millions of all sizes from 10 to 1,000 most beyond comprehension. The output of Mazda lamps is about 170 gione has become enormous, and alannually made in the United States The number of incandescent lamps

Production Beyond Comprehension.

0.8 watts per horizontal candle. the energy on the average to about gas, which has still further reduced fillament in a bulb filled with inert has brought the energy required down to 1.03 watts, and lastly the Mazda C lamp, with the tungsten sten wire for the fillament, which pa the invention of die-drawn tungwhich requires only 2.56 watta, the Mazda lamp, in 1911, made possible bonized by an improved process, lamp, in 1906, with a fillament car-3.8 watts, followed by the so-called squirted filament, in general use in 1892, requiring 3.1 watts, the Gem rent required was later reduced to ly become true. The average curonly the wealthy can afford to burn candles, which has in fact practicalsix watts per horizontal candle-power, at which time Edison said: 'Just wait a little while, and we will make electric light so cheap that inventions of others. The early bam-boo filament lamps required about omy, by Edison and through the later has been greatly improved in econ-"Naturally, the incandescent lamp

year, a guess which time proved to have been way under the mark, 15 years the daily product would become 40,000, or 12,000,000 lamps a "In the summer of 1881, the output had grown to 1,000 lamps per day, whereupon Eddison predicted that in

ity and economy. the designs follow closel the purner of the paper, as material for the burner of the purner of the p 8-Piece Milliam and M 163, 1880, but M sea quickly substituted for home 8-Piece Adam Suite it around the standard restroates to he pushed its improvement and commercial introduction with his pe-"Now that the lamp was invented,

improvements in Lamp Rapld,

spiration come into his head? little bit of that two per cent of inslender carbonized thread had not a he would have thought of trying that the lamp, does it seem possible that cent of good hard work in inventing no doubt, there was at least 98 per spiration-that is, hard work, While, cent inspiration and 98 per cent perthe misleading term, has said that to him; genius consists of two per "Edison has often been called a

finally invented,

ail Orders Promptly Fille

THE STREET STREET STREET

iving Roc ial Intere



exclusive styles and in every at is characteristic of furniture in ces are beautiful in style and

to interest them here.

verstuffed Furnit

1 its luxurious comfort but on tributes to win your favor.

Mahogany Living Room Sui stered in genuine leather.

Mahogany Living Room Sui acks covered in high grade

Overstuffed Leather Suite, up uine Spanish leather.

Overstuffed Tapestry Suite oft loose spring cushions....

Overstuffed Suite with genuin tery, massive mahogany ; and loose cushions......

Overstuffed Suite with tapes The comfort of this suite

eneat, for he has given to it im-

Prizes Are Given To Three General **Electric Employes** Nov. 15,1919.

Articles on "How to Avoid Shop Accidents" Judged By Critics and Fellow Employes.

The "Schenectady Works News," out yesterday, announced prize awards for the essay contest on "How to Avoid Shop Accidents." Prizes of \$25, \$15 and \$10 in War Savings Stamps were offered for the best three papers on this subject. The publication committee reviewed all the manuscripts received, selecting the best five which were printed in the October 26 issue together with a ballot; the final choice in awarding the prizes being left to the workers. The balloting was spirited and the contest very close. The awards, based on the result of the opinion of the majority, were as follows: first prize, K. D. Cammack, building 32; second prize, A. Le Tart, building 14, and third prize, Leslie Weiss, building 11.

The feature of this issue is a most interesting article concerning the works avenue. The pictures used in connection with the story compare the main traffic artery of the works today with the main avenue of 27 years ago. The cover design shows the works avenue of today with its dofty buildings-monuments of modern engineering—the beautiful gardens at the main entrance, the well paved street and the orderly arrangement of automobiles belonging to the employees parked near building 2. The comparative picture shows a long stretch of quagmire streets and low rambling buildings. Unsightly, but yet fully expressive of energy and progress as evinced by the stacks of old 13 which still stands, belching forth great quanti-ties of smoke. The improvements shown by the comparison are simply those of increased sanitation and conveniences and speak volumes for the enward march of the evergrowing electrical industry.

The editorial entitled, "Work," is a message of the day by Hugh Frayne, general organizer of the American Federation of Labor, wherein he claims that the stabilization of conditions in America will

stabilize the world.

He calls for the united effort of every worker in the country to save democracy for the world and humanity. He calls for safe and sane conservatism and in closing says: "There are just two things for Americans to do. First of these is to buckle down and work. The other is to find the things that are wrong and change them."

A brief history of Thanksgiving traditions is given, together with President Wilson's Thanksgiving proclamation which sets aside No-vember 27, 1919, as the day that America will observe this year in returning thanks to Almighty God for the blessings which have been conferred upon our country during the 3 st 12 months.

In another editoria' under the caption "Own a Home" is shown conclusively that any man in ordinary circumstances can, by saving and sacrifice, own his own home, Supplementing this philosophy of home ewpership is a clipping from a current magazine in which home building is characterzed as the land-

marks of progress of the nation.
Edison Day, October 21, was fittingly celebrated in the works, starting with a parade down the works avenue, which terminated at building 76 where a specially arranged program was given in which several hundred employees participated. The feature of the exercises was an address by C. L. Clarke, who was associated with an Edison in the earliest days of the Schenectady works and previously at Mento Park, N. J., which was the birth place of the incandescent eleteric

October, 24 was designated in the works as Roosevelt Memorial day and during the noon period of that day practically every shop held exercises to commemorate the heroto leadership and unadulterated Americanism of our late 'Ex-President Theodore Roosevelt, Many prominent speakers were secured for this occasion and the volumes of eulogy expressed characterized him as a man matchless, modest and refined, of indomitable will and who had sacrified the vulgar prizes of life for the accomplishment of an ideal and who never feared to do his duty

os he understood it.

The second of a series of thrift articles entitled "Banks and Banking" enumerates the various kinds of banks and the different functions performed by each.

Another group of old timers of the G-E organization is reproduced. The picture taken in 1900 represents some of the men of the commutator and machine fitting department in building 16 at that time. The photograph was sent from Erie, Pa., by F. W. Sherman, who worked in 16 at that time and who is now a foreman at the Erie works.

The mechanical feature is a miniature electric railway which was built in building 16 for exhibition purposes at the American Electric Pallways association convention at Atlantic City. October 6 to 10. This useful toy is complete in every detail and its successful operation was

a big feature of the convention.

The suggestion department announces additional awards of \$145 to employees who have submitted helpful ideas.

Outings and social events of the employees, bowling news, and notes, feetball and general news rounds out 32 pages of reading for the workers of the General Electric Comnany.

THOMAS A. EDISON ORANGE, N. J.



Mr. Charles L. Clarke,
Engineering Dept.,
General Electric Co.,
Schenectady, New York.

Cuble Address "Edison, New York"

From the Saboratory
Thomas A. Edison,
Orange, N.J. November 25, 1919.

Mr. Charles L. Clarke, 109 Glenwood Boulevard, Schenectady, N.Y.

My dear Mr. Clarke:

I trust you will kindly excuse the delay in reply to your letter of November 20th. I have simply been in a jam with work and am only just finding my way out.

It is with a great deal of pleasure that I am sending you the approved picture of Mr. Edison. This is the one you like, and it is the one that he likes. I had him autograph it, and am sending it by mail under separate cover today.

I am very glad to learn that the General Electric officials are going to have your Edison Day address published in the General Electric Review. It is certainly worth while. Let me thank you for the copy of the Schenectady Works News, containing editorial reference to the celebration.

I have just received your letter of Nov. 23d, and also the new photograph which you have had taken. This is a splendid picture of you, and I agree with you it will be well to use it in place of the other in the book of biographies.

Trusting you are well and with kindest regards, I remain,

Sincerely yours,

Assistant to Mr. Edison.

Willeadowcroft,

Edison Pioneens panifelet issue of 1918, but you may knew of another far more acceptable to him and your rest, I am only expressing a principle, sect a position, Will you, there fore, do the bourse Electric the favor of sending to me, for The use mentioned, and at an early date, The best and latest picture of The Old Man,

Our pleased to leave, by yours of October 27 the, that my little precede was no acceptable, as fruited us the Selecusetad, Gangette, Oct, 22. red, It was delivered at The noon half-lever before a large gathering of mechanics in the big carporter shop, with officers and foremen also present; Ro I had only about twelve (12) minutes in which to touch the high spots in some neasonably connected fashion, The whiste blev when I was track through, but the men were too interseted in Edison to more a foot until I finished. The incident about living "a hell of a time spruding it" brought a whishwind of appreciative langleter, and from the officials, too, am sending you reparately, copy of the Schewestady Works News, containing edetorial a news reference to the celebration. Hoping you can heep us out with the

picture (should have Edisons autograph out in india indi) at the enrich practicable date, with best wisher, I am. Sincerely yours,

Char. L. Kelarke

EDISON PIONEERS

1870 - 1885

JOHN W.LIEB

VICE PRESIDENTS

5.Z. MITCHELL

T. COMMERFORD MARTIN

HISTORIAN

WILLIAM H. MEADOWCROFT

PRESIDENT

TREASURER
FRED'K A.SCHEFFLER
50 CHURCH STREET
NEW YORK

SECRETARY
ROBERT T. LOZIER
32 W. 40 TH STREET
NEW YORK

November 20, 1919.

Mr. Charles L. Clarke,
Consulting Engineer,
General Electric Company,
Schenectady, N. Y.

Dear Fellow Member:

It may interest you to have from time to time a brief report of the progress in the Executive Committee of the Edison Pioneers.

At the meeting held on November 14th, the following took place:

A committee of five was appointed by the Chair to draft amendments to the By-Laws that will provide for friends of Mr. Edison who have "gone West" under the heading "In Memoriam;" also for Honorary Members who are close personal friends of Mr. Edison and who have in some way contributed to an important extent to his work, or have been associated with him along allied lines, or whose accomplishments Mr. Edison particularly desires to acknowledge, an Associate Membership to take in those who have been associated with or employed by Mr. Edison during the period 1885 to 1899, inclusive.

A committee was also appointed to make preparations for Mr. Edison's seventy-third birthday on February 11, 1920.

The Committee on Badges and Certificates reported progress and will be prepared to make a definite report to the Edison Pioneers at the next annual meeting.

Your Secretary will be very glad, indeed, to receive any suggestions you may care to have brought up before these Executive Committee meetings for consideration.

Yours in Edisonia.

Secretary.



1. Jim Carr

4 E.J. Berggren.

2. R. Lozier

5 W. Scott

3. H. MELean.

6 J. R. Campbell

7. W.M. Mª Dougall.

OVER

ROBERT T. LOZIER 32 WEST 40TH STREET NEW YORK

Mou lo L Clarke

Dec. 22, 1919.

My dear sir: - I know you will be interested in having the enclosed copy of a photograph taken in 1885 of the office force of the Edison Machine Works when located in Goerck Street, New York, which as you know was prior to the establishment of the Edison General Electric Company's plant at Schenectady, New York, now the General Electric Company. The roster is as follows:-

1 - Jim Carr

Was an erector. Whereabouts un-

2 - R.T.Lozier

Charles Bachelor's Secretary. "Where did you get that hat?" "Ask Callahan the Bowery Hatter". An "Edison Pioneer."

3 - H.A. MacLean

Chief Clerk. Now in the machinery business New York City. An "Edison Pioneer."

4 - E.J. Berggren

Bookkeeper. Now an auditor for the General Electric Co. An "Edison Pioneer."

5 - W. Scott

Clerk. Whereabouts unknown.

6 - J.R.Campbell

Stock Clerk. Living at Bogota, N.J. (To whom I am indebted for original photograph) An "Edison Pioneer."

7 - W.M.McDougal

Superintendent. Since "Gone West"

I think this picture helps to mark the growth of the electrical industry, in which you have taken such an active part.

With the Seasons Greetings, I am,

Yours faithfully,

RTL/MKC

109 Cleuwood Boulevard, Schowectady, N.Y., Nov. 23, 1919.

Mr. Wm. H. Meadow eroft. Edison Laboratory, Orange, N. J.

Mydear Mr. Meadowereft!

I lately, had a new photo, tothere in

The studio of the Coneral Electric Company
at wish of its Publication Bureau, The

Otudio was upset, mechanics making
alterations, everyting in confusion and
havry, and I there on a mounts motice.
Consequently, that is, quite rationally, the

picture is, in my opinion, the best of

ever had taken.

Therefore, I am pending you and copy herewite, believing it wise be a bester picture for the Edison Proneers and their comine, publication of biographies of members, if not now too late, than the photo. taken in 1903, which I sent you pouce trine ago.

Sincerely yours, Chas, Lelarks.

Schweetady, N.Y. Sunday, Dec, 14. 1919,

Mr. Wm. H. Meadoweroft. Edison Laboratory' Orange, IV. J.

My den The "Ill radower of t.

The autographed pleato, of the leld Wear, for publication in the Governor Electrice Review, along with my address, cet the Mortes, one Edison Day, Coct. 2/1st, was duly received, Many Many Many thanks.

The plante. Was turned over to the proper autioned, and to be preserved in the Company's archives. Tresumably, the solve thing swile appear in the rest number of the Review.

Wise see that you get a copy.

This late acknowledgment is due to confine ment for a week, and show recovery, due to a browchish cold, but are on dock our more.

With best wisher of the Chiristinas and New Year reason to Edison and yourself. Sincerety yours,

Clear & leturks.

CENTRAL STATIONS

The United States Census Bureoung for all central issued last April gave a total income for all central stations in that year of \$526,886,408. It will be admitted that further acceptable approximation and Pen Face of the filters acceptable advance—\$550,000,000. Examination of the figures shows that for the period 1912-



1917 the percentage of increase was 74.3 and that the compounded rate of the period 1907-1917 was not less than 200 per cent. It is obviously not much out of the way to estimate total central-station income in 1919 at the sum of \$650,000,000. The last two years have certainly seen the generating capacity of every steam central station and most water-power plants taxed to capacity, while there has been a general tendency in the

Tany, 25, 1920,

T.C. Martin

My dear Commenford;

yours of the Was was received one the 24 The, delay due to my being out of town. Your request for a copy of my Edison article " (Edison Day speech, Oct, 21st), printed in the December is one of the General Electric Review, was read, rather as a surprise, for I had not thought it especially worth sending to you, after what you did in writing, with Dyer, Edward-His Life and Inscritions, On request, however, I send referrately The desired copy of the Review, and write it, copy of Nov. 14 the issue of Solienestody Works Wews, wherein is an editorial encomium (?) on my speech. Kindly overlook such overstatements as the editor may have made about me - editors must earn a living, you know; you have been one, loo!

So someone has "told (you) it is fine, and lights up the whole issue"; modoubt an exaggeration, like the famous report of Mark Twain's death. Without doubt, you are dooned to disappointment.

Really, I sweat blood over it, because something had to be said that moned enterall the general run of mechanic

TELEPHONE, 6338 FOREST HILLS T. C. MARTIN 23 GREENWAY TERRACE FOREST HILLS, L. I. Lau 26, 20 my dear Clarke: Mankes for your very Interesting article-when Iget it - and foryour not less Interesting letter which is now before me. Ity to collect all I can about Edison - nothing about him is alien to me if Best Hills 1950 and 29 WEST 39TH STREET NEW YORK CITY Chast Clarkely & 109 Glenwood Id. Schenectade my

I may appropriate the old Latin tag. Ittink ave are going to have some 73 horthday Hope so anyhow. Sie Jonstuly 1. Cucastin

Lau 21.20 T. C. MARTIN 29 WEST 39TH STREET 1/24/2016 NEW YORK CITY TELEPHONE 4600 BRYANT Trydear Clarke: Sunderstand There is an Edison article by you in a recent Soul Blec Review. I am told it is fine, and lights up the whole issue. I can hardly rest till see it. Rease Send it - just the clipping. Hans are developing vicely for the appropriate celebration 29 WEST 39TH STREET
NEW YORK CITY Charl. Clarke De 28 General Sectric Co

mind, not unintelligent, but demanding high lights for operial interest; and not to take up more than tou or twelve minutes of the moon halfhour available for the whote celebration, Tice Pres, and Gail Mago, G. E. Enumous, the only way-up official present, did shake afterwards, adding: "that was a very fine paper". Perhaps he was right, as for as a paper to the men was concerned, for actionage the whiste been before I had finished, not a foot moved at this call to work, Most of the opence was from my own keeoutede, but I did out a ting or two from your book-Exerce lock of acknowledgement; there was no time for it, no place. I refer particularly to Mallory story about the failure and loss of money in the vine one concentration enterfried, notion Edison said: "well, it's all gove; but we had a leel of a good time offending it," To the men it came as an unlooked for climax, which brought such a storm of laughter from the more thanous Mousand ensty Mirords there, there it nearly The stories about the "fuzz on a bee" and the "jack. Muife and bean pot" have been seen - secrets of my own since Neulo Parks clays, in 1880. The first revolved around assistant Nichols, later Prof. of Physics Carnell; but Edison said "bees arse", not simply "bee"; the second concerned Dr. Otto Moses, when Edison ded not have in mind the classic Boston istered, but The equally useful "him pot", Zenas K. Wilbur, The dishonest patent policito, was the cause of making these cigars shipped with rag and The award of the Edison Medal was o. K', only its award should not continue automatically a twoplease affair between G. E. and Westingleouse Coo. I feel disposed to give trutch, final and confelete permanently, What think you is it? How are you?



THIRTY-SECOND MEETING OF THE C'VIC FORUM

THIRTY-SECOND MEETING OF THE CIVIC FORUM

A Non-partisan National Platform for Public Discussion

Testimonial to

MR. THOMAS A. EDISON

INVENTOR, WORLD BENEFACTOR

Speakers

DR. NICHOLAS MURRAY BUTLER, Presiding
President Columbia University

COM. G. MARCONI Inventor Wireless Telegraphy

DR. CHARLES P. STEINMETZ
Consulting Engineer, General Electric Co.

DR. RICHARD C. MACLAURIN
President Massachusetts Institute of Technology

MR. CHARLES A. COFFIN

Chairman of the Board of the General Electric Co.

Author's reading of a poem written especially for the occasion by MR. PERCY MACKAYE

The Civic Forum Medal of Honor for Distinguished Public Service will be presented to Mr. Edison

CARNEGIE HALL,
Thursday Evening, May 6th, 1915, at 8.15

Auspices of The Civic Forum 147 West 48th Street Telephone, Bryant 4897

Admission by ticket to be obtained by application at the Forum office

V

AY 6, 191

AT

TO COME TO THE

will be held at P. M.

of Honor

R. CHARLES P. S A. COFFIN—

personally or by 14897.

THIRTY-SECOND MEETING OF THE C'VIC FORUM

THIRTY-SECOND MEETING OF THE CIVIC FORUM

A Non-partisan National Platform for Public Discussion

Testimonial to

MR. THOMAS A. EDISON

INVENTOR, WORLD BENEFACTOR

Speakers

DR. NICHOLAS MURRAY BUTLER, Presiding
President Columbia University

COM. G. MARCONI Inventor Wireless Telegraphy

DR. CHARLES P. STEINMETZ
Consulting Engineer, General Electric Co.

DR. RICHARD C. MACLAURIN
President Massachusetts Institute of Technology

MR. CHARLES A. COFFIN

Chairman of the Board of the General Electric Co.

Author's reading of a poem written especially for the occasion by MR. PERCY MACKAYE

The Civic Forum Medal of Honor for Distinguished Public Service will be presented to Mr. Edison

CARNEGIE HALL,
Thursday Evening, May 6th, 1915, at 8.15

Auspices of The Civic Forum 147 West 48th Street Telephone, Bryant 4897

Admission by ticket to be obtained by application at the Forum office

N

AY 6, 191

AT

TO COME TO THE

will be held at P. M.

of Honor

S A. COFFIN—

personally or by at 4897.

THIRTY-SECOND MEETING OF THE CIVIC FORUM

TESTIMONIAL TO

MR. THOMAS A. EDISON

CARNEGIE HALL, THURSDAY EVENING, MAY 6, 1915

GUEST CARD FOR PLATFORM SEAT

NOTE. THE BEARER OF THIS CARD IS REQUESTED TO BE SO KIND AS TO COME TO THE PLATFORM ENTRANCE TO CARNEGIE HALL, ON 56TH STREET, EAST OF SEVENTH AVENUE, NOT LATER THAN 8.10 O'CLOCK

The Thirty-second Meeting of the CIVIC FORUM will be held at Carnegie Hall, Thursday Evening, May 6th, 1915, at 8.15 P.M.

MR. THOMAS A. EDISON

will be presented with the Civic Forum Gold Medal of Honor for Distinguished Public Service.

SPEAKERS:

DR. NICHOLAS MURRAY BUTLER-COM. G. MARCONI-DR. CHARLES P. STEINMETZ-DR. RICHARD C. MACLAURIN-MR. CHARLES A. COFFIN-POET: MR. PERCY MACKAYE.

The Members of the New York Electrical Society are specially invited.

Admission by FREE ticket to be obtained by application, personally or by mail, at the Forum Office, 147 West 48th St., Telephone, Bryant 4897.

aydy

Eiftel Tower Station Used.

Owing to the facts that France is at war and that wireless is playing a most important part in the working out of the French military communication system, it was with difficulty that officials were persuaded to permit the use of the Eiffel Tower station in Paris for the receipt of the messages from Arlington.

Only a few seconds at a time, in pericds far apart, were allowed the American engineers, during which they were permitted to listen for the greeting from far-away Arlington. In order that there could be no doubt of the genuineness of the tests, officers of the French Gov-ernment, two or more of whom represented the army, were with Messrs. Shreeve and Curtis in Paris, while Colonel Samuel Reber of the United States Army Radio Service, Captain W. H. G. Bullard, head of the United States Naval Radio Service, and other American Army and Navy officers watched the experiments at Arlington.

Mr. Carty, who not only heads the engineering staff of the telephone company but is President of the American Institute of Electrical Engineers, directed the experiments. Following the announcement of the success of the tests, he predicted that wireless telephonic communication between New York or any other American city and all the great cities of the world was but

a matter of time.

Official Announcement Made.

The announcement given out at the offices of the American Telephone and Telegraph Company, 15 Dey Street, follows:

Transatiantic wireless telephony is an accomplished fact. Observers listening at the Eurel Tower in Paris have heard speech sent out by engineers of the American Telephone and Telegraph Company from apparatus developed by that company and installed at Arlington, Va. The equipment used was that employed a few weeks ago in talking by wireless telephony to San Francisco and Honolulu. The antenna employed at Arlington was that of the United States Navy Department, which was placed at the disposal of the American Telephone and Telegraph Company's engineers through the courtesy of the department.

through the courtesy of the department.

At the time of the announcement of successful wireless telephony from Arlington to Mare Island, Panama, San Diego, and Honolulu on Sept. 29, John J Carty Chief Engineer of the American Telephone and Telegraps Company, made the announcement that the achievement then accomplished demonstrated the possibility of transatlantic wireless telephony from Washington or New York to London, Paris, and other European capitals. He stated that were it not for the conditions of war existing in Europe, the accomplishment of transatlantic wireless telephony would undoubtedly have preceded the much more difficult feat of transmission to Honolulu.

By Courtesy of France.

By Courtesy of France.

The announcement that speech has actually been transmitted from Ar-lington to observers stationed at the Effel Tower, Paris, marks the con-clusion of another chapter in the experiment undertaken by the American Telephone and Telegraph Company. When Mr. Carty's engineers commenced work on the long-distance wireless telephone experiments, observed with receiving apparatus were sent not only to Panama, San Diego,

Continued on Page 3.

who

carnade n it iono-

t Saybrook. - " to know about en cut him off.

and

hone

ainl

iirts

lade

nported shirtised. it it was found

tmakers made espect to the

ion might per-

t or stiff cuffs.

West 34th St. r Waldorf-Astoria

ached, said Mr.
rk & New EngNew York. The
a also served it
ermont, as well
rthern, the New
Tork, Providence

iltos there," he dmitted that it he Hartford and ation Company, amboats.

amboats.
tarted knew what railles ran from the cities, he was far they enabled method them to other ates. He pointed windsor SteamNew England its much as cotton and lumed away its manufacmuch as the railways

ker followed up this line he obtained from Mr.

New Enrande e rand alleged e New Haven, len, was served defense.

Ien, was served defense.

Then as Mr. Swacker presen dence the famous tripartite which regulates the use of Central Terminal by the New tral and the New Haven, and send stonington y water and by Merchants and and Stonington y water and by & Providence & ork & New Engwith the Boston ached said Mr.

New Enrand Dar, who has been associated defense.

Then as Mr. Swacker presen dence the famous tripartite which regulates the use of Central Terminal by the New tral and the New Haven, and jections from the defense by a lextracts from the minutes of rectors' meetings of the Ne This brought forth a long is overruled them and the document of the defense.

Then as Mr. Swacker presendence the famous tripartite which regulates the use of Central Terminal by the New tral and the New Haven, and jections from the defense, but Journal of Central Terminal by the New tral and the New Haven, and jections from the defense.

Then as Mr. Swacker presendence the famous tripartite which regulates the use of Central Terminal by the New tral and the New Haven, and jections from the defense of Central Terminal by the New tral and the New Haven, and jections from the defense of Central Terminal by the New tral and the New Haven, and jections from the defense of Central Terminal by the New tral and the New Haven, and jections from the defense of Central Terminal by the New tral and the New Haven, and jections from the defense.

admitted.
This led to the examination of the control of the contro

ADVERTISEMENT.



50c and \$1.00 for all Or-chestra Seats Every Evening. 25 and 50c all Orchestra Beats at Matinees.

TRIANGLE PLAYS Knickerbocker will believe



LILY cups those nice individuals you see in the theatres are evallable for use in your own office. ow Laly Cup

Eiftel Tower Station Used.

Owing to the facts that France is at war and that wireless is playing a most important part in the working out of the French military communication system, it was with difficulty that officals were persuaded to permit the use of the Eiffel Tower station in Paris for the receipt of the messages from Arlington.

Only a few seconds at a time, in periods far apart, were allowed the American engineers, during which they were permitted to listen for the greeting from far-away Arlington. In order that there could be no doubt of the genuineness of the tests, officers of the French Gov-ernment, two or more of whom represented the army, were with Messrs. Shreeve and Curtis in Paris, while Colonel Samuel Reber of the United States Army Radio Service, Captain W. H. G. Bullard, head of the United States Naval Radio Service, and other American Army and Navy officers watched the experiments at Arlington.

Mr. Carty, who not only heads the engineering staff of the telephone company but is President of the American Institute of Electrical Engineers, directed the experiments. Following the announcement of the success of the tests, he predicted that wireless telephonic communication between New York or any other American city and all the great cities of the world was but

a matter of time.

Official Announcement Made.

The announcement given out at the offices of the American Telephone and Telegraph Company, 15 Dey Street,

Transatlantic wireless telephony is an accomplished fact. Observers listening at the Eiffel Tower in Paris have heard speech sent out by engineers of the American Telephone and Telegraph Company from apparatus developed by that company and installed at Arlington, Va. The equipment used was that employed a few weeks ago in talking by wireless telephony to San Francisco and Honolulu. The antenna employed at Arlington was that of the United States Navy Department, which was placed at the disposal of the American Telephone and Telegraph Company's engineers through the courtesy of the department.

through the courtesy of the department.

At the time of the announcement of successful wireless telephony from Arlington to Mare Island, Panama, San Diego, and Honoluiu on Sept. 29. John J Carty Chief Engineer of the American Telephone and Telegraps Company, made the announcement that the achievement then accomplished demonstrated the possibility of transatlantic wireless telephony from Washington or New York to London, Paris, and other European capitals. He stated that were it not for the conditions of war existing in Europe, the accomplishment of transatlantic wireless telephony would undoubtedly have preceded the much more difficult feat of transmission to Honolulu.

By Courtesy of France.

By Courtesy of France.

The announcement that speech has actually been transmitted from Arlington to observers stationed at the Effel Tower, Paris, marks the conclusion of another chapter in the experiment undertaken by the American Telephone and Telegraph Company. When Mr. Carty's engineers commenced work on the long-distance wireless telephone experiments, observed with receiving apparatus were sent not one 50 Panama, San Diego,

Continued on Page 3.

d the

reard

bt at

hade

iono-

sen-and

neard

isical

play

rthern, the New Jork, Providence

Saxbrook. to know about en cut him off. dmitted that it he Hartford and amboats.

knew what railles ran from the
les ran

ker followed up this line he obtained from Mr.

iirts lade

nported shirtised. it it was found

tmakers made espect to the

on might pert or stiff cuffs.

West 34th St. r Waldorf-Astoria

New Engne era of alleged
e. New Haven,
len, was served
e. the Fitchburg,
the New York &
Colony, and the
lers' Steamship
I connections oy
Merchants and
l and Stonington
y water and by
& Providence &
ork & New Engwith the Boston
ached, said Mr.
rk & New EngNew York. The
also served it
ermont, as well
trhern, the New
York, Providence
'ork, Providence
'ork, Providence
'ork, Providence
'ADVERTISEMENT

ADVERTISEMENT.



50c and \$1.00 for all Or-chestra Seats Every Evening. 25 and 50c all Orchestra Beats at Matinees.

TRIANGLE PLAYS



LILY cups those nice individu you see in the theatres are evallable for use in your own office De LAly Cup

WIRELESS BY PHONE ACROSS THE OCEAN

Continued from Page 1.

ment limited facilities to see at the Effet Tower station diaced at their disposal, appreciation of the interest and a courtesy of the French Government of the Effet Tower station of the Added to time available seed to a speedy completion of the Added to this was the handicap ag from the fact that all regulations with the Effect of the Effe

In a cable received by Mr. Carty toay concerning the results of tests
ade early this morning, Mr. Shreeve
proported speech received by him and
te time of its reception. The matter
tectived at Faris was that sent from
riington, where R. A. Heising, B. B.
ebb and other telephone engineers
the remaining that the conventions

and other telephone engineers manipulating the apparatus at insmitting station. Mr. Webb e talking station. Mr. Webb e talking throughout the extits this morning. Itaneously with the reception at speech sent out from Arlington elved on the wireless antennae viewed on the wireless antennae vor the stationary of the American Telephone and prompany at the Feuri Harry Yard, Honolulu. Mr. Espenti Honolulu reported that he as conversation throughout the chedule and that Mr. Webb's chedule and that Mr. Webb's the announce of the stationary was issued by who was in Chicugo, was on the long distance telephone ed to tell the story of the stationary and about the Parls sphing.

about the company of the company of

Carty Describes Tests.

June last, as you may or may not "he said, "we sent out several tions to test the possibilities of gs telephony over great distances, these expeditions went to Pancockher

Cable Told of Success.

It was explained that the cablegram from engineers in Paris arrived late in the afternoon announcing that the "hellos" and "good-byes" of Webb had been heard distinctly by Shreeve, Curtis, and French officers who were "listening in" during the experiment of Wednesday night.

"Do you think there is a possibility of the commercial use of the wireless telephone between New York and Paris or London?" Mr. Carty was asked.

It is a pretty hazardous question to answer just at the present time," he said, "and I would not like to make a said," and I would not like to make a

to the Western coast and points across the Pacific Ocean. THEODORE N. VAIL. Following the talk with New York Mr. arty conversed over the long distance elephone with Thomas A. Edison, who was in San Francisco, where he was the cuest at a dinner arranged to celebrate he thirty-sixth anniversary of his injection of the incandescent light. The indiversary was celebrated in Edison, when the converse was considered as a francisco. During the dinners he transcontinental telephone communication was utilized to keep the diners on the two coasts in touch with each other.

"Istened in " at Chicago, ulated Mr. Edison on his s, and the inventor said he very plainly the music of records transmitted from

not like to say how Mr. Edison could hardly believe that F. T. alized, for there is this had been accomplished. When Mr. York

t amount of hard work and ation shead of us. You must aid a shead of us. You must aid that what has been proved the hardest part of the work thought at it can be done, and used the third that it can be done, and the chart that it was the done, and the work that it can be done, and the chart that it can be done and the chart that it can be done, and the chart that it can be done, and the chart that it can be done and the chart that it can be done, and the chart that it can be done and the chart that it

Continent to Famous Inventor.

Continent to Famous Inventor.

Special to The New York Times.

WEST ORANGE, N. J., Oct. 21.—This was "Edison Day" at the Panama-Pacific Exposition in San Francisco, and to celebrate it here at telephone connection was made between Mr. Edison's home and the fair grounds. While the inventor, aided by a special sound amplifier. listened in San Francisco, a long message from Miller Reese Hutchinson, Superintendent of the Edison's own phonograph.

The message congratulated Mr. Edison Works, was transmitted by Mr. Edison's own phonograph.

The message congratulated Mr. Edison works, was transmitted by Mr. Edison's reply was received by his latest invention the telescribe, and later every one in the room received a cylinder on which the words of the inventor had been transcribed automatically.

Among those who journeyed to Edison's home and found the streets about the lighted by 5,000 candle-power lights.

the same of communication with than in freeded to communicate with than in freeded to communicate with than in freeded to communicate with the party was part as stainly and distinct the party was the party of stainly and distinct the party was the party of the communication with the party of the party o cylinder on which the words of the inventor had been transcribed automatically considered to Ball-son's home and found the streets about it lighted by 5,000 candle-power lights, while immense searchlights played on it from the roof of the laboratory, were charles and Theodore Edison, Mr. and Mrs. Homes A. Edison, Jr., Mr. and Mrs. William Edison, the last two being children by the inventor's first sizes. The constant of the co

oloy, here included Dr. Schuyler celer, President of the Crock celer Company; W. H. Coade, all that company; Mr. and Mrs. W. blinson of Mobile, Ala.; Mr. ar Tebbetts, also of Mobile the Re

Celabrotion of Edison's 70th berthday

Consulting Engineering Debt. General Electric Co., Schenectally, 1V. Y., Meby. 6, 1918. M. Frederick a. Scheffen, Treas, Edison Proncers. 85 Liberty Street, Thave the notice, of the 5th inst., from How your City. Secretary profile it the old boys - Edison a diener meeting of the old boys - Edison Proneers in New Jose a # 2.00 ticker T 71st-birthday) por that amusal dues con said dinner; also that annual dues are \$5.0 \$5.00. The for the for pot in these was are right for the foren watching out, gaver Excle for the pover shy at the \$1,00 diuse ez, with Hoover shy at the \$12,00 diener; te great from by his first near the great body pass plus present successful. is too extravol of cu se great body pass the mean succession of the dear successions can deure dear with the together like But seriously) The and when they was longether like to lead, and dared for leady, me work the lead to have land; we work the said for lead in man's land. Let a and work Edison " no man's land",

The air and work Edison " no man's land",

The air and more Edison " her planty then to paste

The air and mader the planty then to paste

The air and my work of the planty the appearance of the second The acid wor Edite " no there to parke the see got hung refrence to parke the we got hung refreched wire lung to the winter the see th For and when the we got hung retracted wire the ally a through white the to barbed wir ling to through with the

world largely saying that it couldn't be done, and now our old leader is again at another problem, with the same youthful ardor, to break through the evening's lines of barbed wire, and help make no main land safe for democracy, to the sure accomplishment of wheele end, God aiding, he will contribute mightly, we know,

I greet you all in spirit. Here's long life to Edison Proneers, until the last one of ses is guttered to his fathers,

THE PERSON NAMED IN COMPANY OF THE PERSON OF

THE REPORT OF THE PARTY OF THE

Seicerely yours, Class, Llebarke.

"EDISON PIONEERS"

(Continued from page 828)

many interesting reminiscences the gathering adjourned to meet at the Lawyers Club on Feb. 11, 1918, to celebrate Mr. Edison's 71st birthday by an informal luncheon. Over forty "Edison Pioneers" attended this luncheon on Feb. 11th, at which time the constitution and by-laws of the organization

were formally adopted and various steps taken to further the aims and objects of the "Pioneers." These steps among other things embraced the erection of a memorial on the Lincoln Highway where it is to pass Mr. Edison's old home and laboratory buildings at Menlo Park, N. J.; the cooperation with the Edison's Association of Illuminating Companies in the formation of an Edison Museum, the preparation of a Biographical and Historical Volume to be presented to each member and certain other important matters of which it is inadvisable to speak at the present time. It was also decided that the "Edison Pioneers" should be perpetuated by making the members' descendents eligible to membership. A birthday telegram of congratulations and hearty well wishes was sent to Mr. Edison, whose absence in Florida made it impossible for him to be present and after addresses by President Francis R. Upton and others, the

party adjourned.

Among the men already identified with the "Edison Pioneers" are Francis R. Upton, Orange, N. J.; Sydney B. Paine and W. S. Andrews, Schenectady, N. Y.; F. B. Potter, Charles A. Benton, Fremont Wilson, William J. Hammer, Edwin W. Hammer, Frank S. Hastings, F. S. Smithers, Frank S. Hastings, F. A. Wardlaw, H. A. McLean, Charles S. Bradley, Peter Weber, C. Roch, Arthur S. Reves, A. C. Pointier, W. Pelzer, C. W. Kiddle, Alexander Mungle, W. A. Donshea, A. S. Campbell, Henry Stephenson, New York; Philip S. Dyer, Easton, Pa.; Geo. S. Grower, Ansonia, Conn.; E. G. Acheson, Niagara Falls; Charles Wirt, Philadelphia, Pa.; John W. Lieb, New Rochelle; A. O. Tate, Philip Klein, Montreal, Can.; John Ott, William Meadow-croft, C. N. Wurth, W. S. Gilmore, Orange, N. J.; Samuel Insull, Henry M Byllesby, Chicago, Ill.; P. B. Shaw, Williamsport, Pa.; William M. Brock, Paterson, N. J.; Wilson S. Howell, Pleasantville, N. J.; John W. H. Well, George F. Morrison, Newark, N. J.; M. F. Moore, Roselle, N. J.; William Carman, Menlo Park, N. J.; Schuyler S. Wheeler, Ampere, N. J.; Chao. L. Clarke, Schemetaldy, N. Y.

Schemetticky, 21. 4. may 1, 1918.

Mr. Frederick a. Scheffler,. 85 Liberty Street, New York City.

My dear Fred;

I have noted, in the april issue of the Electrical Experimenter", published at 233 Fullow St., Meso York, a quite full account of the organization of the "Edison Pioneers", with pleats, least-tone of the members at their first dinner, on Feb. 11th, Edison 71 st bortheday.

Quite an extensive list of names of members was also printed, but I noted that reine was often happen, but I do want to make sure. Utal I am on the official roll of members. I sent you check for \$ 5,000 in progressed of annual dues, on Feb. 6 the, but do not field a return receipt for sume, and therefore with now to make sure the record is straight. With best wishes,

> Successely yours, Char. L Clarke.

Consulting Engineer, General Electric Co.

at Moulo Park. Febr. 1, 1880,

Schenectady, N. Y., Sany, 1, 1919.

My dear Mr. ma Mrs. Edison, Mour kind invitation to me, as one of the Edison Proneers, to meet your Son Charles and wife, on this New Years Day, at your home, was received with much pleasure, yesterday! I heartily wish it had been possible to be with you loday, and with my associates of the proneer days, to renew and negoice in the old friendships made while all goined in helping lay the foundations of this great Tust the same, however, I am write you in friendly spirit, and while writing now, can see you all having a happy time, and doubly care free with

Inventor, Not Scientist.

"He has never claimed to be a scientist, and prefers to be known as an inventor, seeking to devise things useful to man and of commercial

ry for a certain investiremarked that no man real inventor unless he verything with a jack ean pot.

sty of Character.

man of tremendously perament combined with

character, Like most men

geously attempt new take the lead, he has failed to succeed and been lost, but he has ehind his strictly legal oid payment of what he is justly moral debts. As In to the point: An enh was promoted on cerlled with inert aventions, failed because further reduced Wery of iron ores with it is appropriate on this occasion, ides it had the om 10 to 1,000 she no exception. This that attention be confined substantary for a small by 13 per cent. The confined substantary for a small by 13 per cent. The confined substantary for a small by 13 per cent. The confined small by 13 per cent

derately Rich.

justly a moderately rich comparison with the he has added to this s, he has been one of aid men in money.

ionable whether any of numerated according to our work on the same on has been paid, would money to buy one r a pair of cotton socks. iter reward than money is his-the gratitude, d respect of everyone. ut of the world one of creditors, for which a emory of him and his e through centuries to

.lly all electrical indusof every groaning mahe calls 'too m of every wheel, the hammer, the rasp of ar of the furnace flame, ne can bawl ced that he is neasure but the amplithe work that went in Edison's laboratory er ready to be eason by the in Edison's laboratory not take kind-elling energy, directed And let us not for-

889 get that we, not Edison, are reaping the major return from his labor.

"Let us hope that Edison may be with us, possessed of unabated mentality and sound physical vigor of which there is certainly every reasonable promise today, to join in celebrating the 50th anniversary of the buth of the incandescent electric

was questioned from some quarters proved in econinvention, 40 years ago today, at als added their mention, 40 years ago today, at als added their mention, 40 years ago today, at als added their required about zontal candleinvention of such modefrom many quarters and depractical electric lamp of such modefrom many quarters and depractical electric lamp of such modefrom many quarters and depractical electric lamp of such modefrom many quarters and depractical electric lamp of such modefrom many quarters and depractical electric lamp of such modefrom many quarters and depractical electric lamp of such modefrom many quarters and depractical electric lamp of such modefrom many quarters and depractical electric lamp of such modefrom many quarters and depractical electric lamp of such modefrom some quarters and in substance are involved in econincrease and in substance are involved in econincrease and in substance and in substance and in substance are involved in econincrease and in substance are involved in econincrease and in substance are involved in econincrease and in substance and in substance and in substance are involved in econincrease and in substance and in substance and in substance are involved in econincrease are involved in econincrease and in substance are involved in econincrease are involved in eco erate illuminating power as to take

erate illuminating power as to take
the place of the ordinary gas burnert succeed right
to place of the ordinary gas burnert succeed right
so cheap that
for lighting our homes and similar rary, he devised,
afford to burn retty poor lamps, afford to burn fact practicaluses.

incandescent electric lamp, was made ld not be done, ter reduced to by Thomas Alva Edison, whose nameing his efforts y the so-called a grateful world holds in high honor tive point. The for his thus giving to it one of the was similar to general use in greatest boons for its comfort and ther undertaking other civilizing influences ever one greatest boons for its comfort and ther undertaking fatts, the Gem other civilizing influences ever con- was concerned, follament carferred by the brain and hands of to inquire. "Isn't 2.56 watts, the nem one man.

"Although this is not the only in-u have done you wention made by him to the world's to get any re- ignment, which have done to be a sixty of the world's to get any re- ignment, which

benefit, for he has given to it im-Vhy, man, I have liament, which provements in printing and duplex its, I know sevice required telegraphy, the quadruplex telegraph, igs that won't the target the carbon telephone transmitter by the carbon telephone transmitter by which the range of speech was at, Rewarded, once immensely increased, the phono- the scrap heap erage to about once immensely increased, the phonograph, the fundamental inventions ile one up faster al candle.

absolutely necessary to a large and on. At last his universal electric light and power ed. On Tuesday, omprehension.

system, his storage battery and motion picture apparatus, and many other inventions represented by congiderably more than 1,000 patents in obe. The seem-hension. The es actively concerned had the land of the states alone, nevertheless, lurged for beyond is about 170 no pay the debte and this the United States alone, nevertheless, lured far beyond s is about 170 no pay its debts, and this it is appropriate on this occasion, ides it had the om 10 to 1,000 she no exception. This

tury, but this discovery remained for years commercially unutilized because of the prohibitive cost of together liking untry. current from a chemical battery, has said that oker.
which was the only known available

"Faraday, in 1831, led to its use rd work. While, eristics not alby the discovery of magneto-electric at least 98 per uses tobacco induction and devised an electric ork in inventing likes the other machine, which was the forerunner m possible that ing it affects of the electric generators of today, at of trying that he can, never-But it was not until after 1870 that wead had not a the electric arc lamp and the gener- per cent of inator were sufficiently developed to his head? be in commercial use for arc light- Lamp Rapid. ing on a scale worthy of much consideration.

"Many efforts were also made to ement and comsmall illuminating power suitable bs with burners are naving for home use, until it was finally board were in and correctly pronounced impossible. May, 1880, but ting meat as Effort was also made to produce in- substituted for d has always candescent lamps, all of which were I for the burner complete failures.

A Target of Ridicute.

A Target of Ridicure. 1881, the output "When it became known, in 1878, lamps per day, that Edison, already an inventor of redicted that in fame, had undertaken to solve the oduct would be-problem, the so-called "sub-division 06,000 lamps a of the electric light," he at once be-came the target of ridicule from the mark.

been called a are now pro-

source of electricity for this purpose. 98 per cent per- us in general, lled with rags renience, when proved by his of that kind

n to surprise p was invented, if to another stemious, but with his peient in durabil-

courage of his

Inventor, Not Scientist.

was questioned from some quarters roved in econin the press, on the ground that it rough the later
was a stock-jobbing scheme, and
jealous gas journals added their
hilarious share to the fun and derision poked at him from many quarters.

"Naturally. the incandescent lamp ild not spend his life in
ild inot spend

"Well, he didn't succeed right away; on the contrary, he devised, afford to burn human-like, some pretty poor lamps, fact practical-but was learning a great deal about average curhow the thing could not be done, thereby concentrating his efforts nearer to the objective point. The situation for a time was similar to general use in that relating to another undertaking to the Gem in which Edison was concerned, which lead a friend to inquire. "Isn't 2.56 watts, the amount of work you have done you haven't been able to get any results?" "Results! Why, man, I have gotten a lot of results, I know several thousand things that won't the tungsten work."

Edison's Efforts Rewarded,

"And all the time the scrap heap erage to about grew—nobody can pile one up faster al candle. or easier than Edison. At last his efforts were rewarded. On Tuesday, omprehension. October 21, 1879, he had the audacity indescent lamps tired thousand dollars of to carbonize a slender cotton thread United States In paid off that debt perand try it as an incandescent burner rmous, and al- ng that no company in in an exhausted globe. The seem-shension. The es actively concerned had ingly frail thing endured far beyond is about 170 no pay its debts, and this all expectation, besides it had the om 10 to 1,000 s be no exception. This small surface necessary for a small y 13 per cent ned on him, at 50 years of light, and the long, slender, filamen-tary body of high resisting carbon and Gem car-ehings looked bluest, he tary body of high resisting carbon and cold chings looked bluest, he required for conductors of economic ere made. Anjaimed: Well, it's all size. The lamp long sought, and in 240 millions of de had a hell of a good general considered impossible, was all kinds and cyg it,' and then cheerfinally invented.

"Edison has often been called a are now progenius, and not altogether liking untry. the misleading term, has said that oker. to him genius consists of two per man man, just cent inspiration and 98 per cent per- us in general, spiration-that is, hard work. While, eristics not alno doubt, there was at least 98 per; uses tobacco cent of good hard work in inventing likes the other the lamp, does it seem possible that ing it affects he would have thought of trying that he can, neverslended carbonized thread had not a lled with rags little bit of that two per cent of in- renience, when spiration come into his head?

Improvements in Lamp Rapid.

"Now that the lamp was invented, If to another he pushed its improvement and comculiar energy. Lamps with burners ase of naving of carbonized bristol board were in commercial use by May, 1880, but ting meat as bamboo was quickly substituted for d has always the paper, as material for the burner holic drink-, with great improvement in durability and economy.

"In the summer of 1881, the output courage of his had grown to 1,000 lamps per day, one can bawl whereupon Edison predicted that in 15 years the daily product would become 40,000, or 12,000,000 lamps a year, a guess which time proved to not take kind- elling energy, directed have been way under the mark.

"He has never claimed to be a scientist, and prefers to be known as an inventor, seeking to devise things useful to man and of commercial value. He once said in substance

> ry for a certain investiremarked that no man

real inventor unless he verything with a jack ean pot.

sty of Character.

man of tremendously perament combined with character, Like most men geously attempt new take the lead, he has failed to succeed and been lost, but he has ehind his strictly legal oid payment of what he is justly moral debts. As In to the point: An enh was promoted on cerfurther reduced aventions, failed because Wery of iron ores with Eld not compete, and the ped business with a loss rons of dollars put in and

nintature lamp yo work to pay off that

derntely Rich.

justly a moderately rich comparison with the he has added to this s, he has been one of

ionable whether any of numerated according to our work on the same on has been paid, would money to buy one r a pair of cotton socks iter reward than money is his-the gratitude, d respect of everyone ut of the world one of creditors, for which a emory of him and his re through centuries to

lly all electrical indusof every groaning mahe calls 'too m of every wheel, the hammer, the rasp of ar of the furnace flame, neasure but the amplier ready to be ! the work that went eason by the in Edison's laboratory

get that we, not Edison, are reaping the major return from his labor.

Let us hope that Edison may be with us, possessed of unabated mentality and sound physical vigor of which there is certainly every reasonable promise today, to join in colchrating the 50th anniversary of the birth of the incandescent electric

aid men in money. proved by his of that kind n to surprise il in its selec-

ced that he is

lled with inert

Inventor, Not Scientist,

'He has never claimed to be a scientist, and prefers to be known as an inventor, seeking to devise things useful to man and of commercial Value. He once said in substance "Naturally, the incandescent lamp ild not spend his life in

has been greatly improved in econ- fic investigation of the ee but must be producing of utility.

another occasion, when insisted that an unensive piece of apparatus, ry for a certain investiremarked that no man real inventor unless he verything with a jack ean pot.

sty of Character.

man of tremendously squirted filament, in general use in perament combined with 1892, requiring 3.1 watts, the Gem character, like most men lamp, in 1906, with a filiament cargeously attempt new bonized by an improved process, take the lead, he has failed to succeed and been lost, but he has which requires only 2.56 watts, the Mazda lamp, in 1911, made possible by the invention of die-drawn tungsten wire for the filiament, which chind his strictly legal has brought the energy required down to 1.03 watts, and lastly the old payment of what he is justly moral debts. As In to the point: An en-Mazda C lamp, with the tungsten ch was promoted on cerfiliament in a bulb filled with inert aventions, failed because gas, which has still further reduced wery of iron ores with the energy on the average to about gld not compete, and the oped business with a loss Production Beyond Comprehension. rons of dollars put in and "The number of incandescent lamps tired thousand dollars of annually made in the United States In paid off that debt peralone has become enormous, and al- ng that no company in most / beyond comprehension. The es actively concerned had output of Mazda lamps is about 170 no pay its debts, and this millions of all sizes from 10 to 1,000 she no exception. This watts, of which nearly 13 per centined on him, at 50 years of are of the Mazda C type, and in 1918, ering personal loss, and 20 millions of squirted and Gem car-chings looked bluest, he 20 millions of squitce and and Anjaimed: 'Well, it's all grand total of about 240 millions of de had a hell of a good incandescent lamps of all kinds and cg it,' and then cheersizes from the little miniature lampyo work to pay off that to the largest Mazda C are now pro-

duced yearly in this country. Edison a Smoker.

"Edison is a very human man, just about like the rest of us in general, but with some characteristics not altogether common. He uses tobacco both ways, and rather likes the other way the better, believing it affects the nerves less. But he can, nevertheless, smoke cigars filled with rags and hair without inconvenience, when busy on a problem, as proved by his smoking up a box full of that kind made specially for him to surprise someone helping himself to another man's goods.

omy, by Edison and through the later

inventions of others. The early bam-

boo filament lamps required about

six watts per horizontal candle-

power, at which time Edison said:

Just wait a little while, and we will

make electric light so cheap that

only the wealthy can afford to burn

candles,' which has in fact practical-

ly become true. The average cur-

rent required was later reduced to

3.8 watts, followed by the so-called

0.8 watts per horizontal candle.

"He believes in abstemious, but generous diet in the sense or naving a variety, but is careful in its selection, practically resisting meat as bad for the health and has always absolutely cut out alcoholic drinkalso, by the way, what he calls 'too

much sleep.' "He always has the courage of his convictions, and no one can bawl him out if he is convinced that he is neasure but the ampliin the right. He is ever ready to be convinced for good reason by the other fellow, but does not take kind- elling energy, directed ly to the bawling process.

derntely Rich.

justly a moderately rich comparison with the he has added to this s, he has been one of aid men in money. ionable whether any of numerated according to our work on the same on has been paid, would money to buy one r a pair of cotton socks. iter reward than money is his-the gratitude, id respect of everyone ut of the world one of creditors, for which a emory of him and his to through centuries to

lly all electrical indusof every groaning mam of every wheel, the hammer, the rasp of ar of the furnace flame, ! the work that went in Edison's laboratory And let us not for get that we, not Edison, are reaping

the major return from his labor. "Let us hope that Edison may be with us, possessed of unabated mentality and sound physical vigor of which there is certainly every reasonable promise today, to join in the birth of the incandescent electric

Inventor, Not Scientist.

"He has never claimed to be a scientist, and prefers to be known as an inventor, seeking to devise things useful to man and of commercial value. He once said in substance that he could not spend his life in the scientific investigation of the fuzz on a bee but must be producing something of utility.

"And on another occasion, when an assistant insisted that an unusually expensive piece of apparatus, was necessary for a certain investigation, he remarked that no man could be a real inventor unless he could do everything with a jack knife and bean pot.

Honesty of Character.

"He is a man of tremendously hopeful temperament combined with honesty of character, like most men who courageously attempt things and take the lead, he has sometimes failed to succeed and money has been lost, but he has never hid behind his strictly legal rights to avoid payment of what he considered his justly moral debts. As an illustration to the point: An enterprise, which was promoted on certain of his inventions, failed because of the discovery of iron ores with which he could not compete, and the company stopped business with a loss of some millions of dollars put in and several hundred thousand dollars of debt. Edison paid off that debt personally, saying that no company in which he was actively concerned had ever failed to pay its debts, and this one must be no exception. This failure entailed on him, at 50 years of age, a staggering personal loss, and yet, when things looked bluest, he brightly exclaimed: 'Well, it's all gone, but we had a hell of a good time spending it,' and then cheerfully went to work to pay off that debt.

Moderately Rich.

"Edison is justly a moderately rich man but in comparison with the wealth which he has added to this world's goods, he has been one of the poorest paid men in money.

"It is questionable whether any of us here, if renumerated according to the value of our work on the same scale as Edison has been paid, would have enough money to buy one square meal or a pair of cotton socks."

But a greater reward than money can measure is his—the gratitude, the honor and respect of everyone. He will go out of the world one of its greatest creditors, for which a respecting memory of him and his work, will live through centuries to come.

'In practically all electrical industry, the sound of every groaning machine, the hum of every wheel, the ring of every hammer, the rasp of the file, the roar of the furnace flame, are in large measure but the amplified echoes of the work that went on years ago in Edison's laboratory under his impelling energy, directed by this genius. And let us not forget that we, not Edison, are reaping the major return from his labor.

That us hope that Edison may be with us, possessed of mabated mentality and sound physical vigor of which there is certainly every reasonable promise today, to join in celebrating the 50th anniversary of the birth of the incandescent electric

109 Clenwood Bonkevand, Schene Lady IV. Y., Nov. 20, 1919.

Mr. Wm. H. Meadoworoft. Edison Laboratory. Orango, N. J.

My dear Mr. Meadower oft:

That address of mine, one Ecliston Day, is no well throught of by General Electric Officials, that it is to be published in the coming issue of the General Electric Pleating issue of the General

Especially to grace the whole thing,
the editors want to publish Edisone's
portrait write it, and have asked
we to help them out by getting, if
possible, the latest pleats of lim
that is most pleasing to those best
qualified to pass upon the merits of
such pictures, as truly representative
of the man today.

and I maturally, appeal to you for help. My suggestion, I you allow me, is a portrait picture rather than full levegth, and I may add that I have never seen a better portrait than the one, solich was inserted in the 29 WEST 39TH STREET NEW YORK CITY

Ton caube with us, or at Ceast send your "73" as the telegraphers do. Jonns I. The Edison Medal is row being run twopshase- 9.2. one Jear and westinghouse nout Goodplan - savesbother!

109 Glenwood Boulevard, Schenectasy, N.Y., Jany, 25, 1920,

T.C. Martin

My dear Commerfeed:

Yours of the West was received on the 24 The, delay due to my being out of town. Your request for a copy of my Edison article " (Edison Day speede, Oct, 21st), printed in the December is one of the General Electric Review, was reed, rather as a purprise, for I had not thought it especially worth sending to you, after what you did me writing, with Dyer, teleson-His Life and Inventions, On request, however, I send referrately the desired copy of the Review, and with it, copy of Nov. 14th issue of Soliencatedy Warks Wews, wherein is an editorial encomium (?) on my speech. Kindly overlook such overstatements as the editor may have made about me - editors must earn a living, you know; you have been one, too.

So someone has "told (you) it is fine, and lights up the whole issue"; modoubt an exaggeration, like the famous report of Mark Twain's death. Without doubt, you are dooned to disappointment.

Really, I sweat blood over it, because something had to be said that would entirall the general run of mechanic

